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ORIGINAL ARTICLES.

THE PROBLEM OF THE INEBRIATE.[1]

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Speaking after the manner of the street, we may say that there is no harder conundrum proposed to modern civilization than this same inebriate. Utterly useless to himself, he becomes a nuisance to everybody else. This difficulty meets us at the outset of the discussion, what is meant by the inebriate? We are accustomed to consider drunkenness and inebriety as synonomous terms, and yet not every man who gets drunk is what we call an inebriate. The best man in the world, at least in his age—it is true that age was sunk rather low—was Noah, and he was barely out of the ark when he got drunk; yet, in view of his previous as well as subsequent history, we should hesitate to call him an inebriate.

To better illustrate the meaning of the term inebriate, I present to you in this paper the brief memoir of a typical inebriate, no fancy sketch, but one of real flesh and blood. For obvious reasons I withhold his name, but for convenience of designation will call him "the Col."—a common title about Washington—which will answer our purpose as well as any. This is not a temperance lecture in disguise, introducing the Col. as an object-lesson, after the manner of the Athenian teacher who exhibited a drunken man to his pupils. He is presented simply as a pathological specimen, and I do this with no feeling that in doing so any confidence is violated or that I am exposing anything which the Col. would have preferred should be kept covered now that he is gone, for this man, while living, had no affectation of virtue; delicacy of feeling was a weakness of which he was never suspected; public opinion he despised; the wages of sin were satisfactory to him so only he had the sin; he was content to pose as an "awful example;" and I think he would have consented that his viscera should be photographed to illustrate Sewall's lectures on the coats of the stomach, merely stipulating that their membranes should be occasionally moistened with whiskey. What study the anatomist might make of his bones when he had done with them, what lesson the moralist would draw from his finished life, were matters of profound indifference to him, as I do not think he expected to pass this way again.

My first acquaintance with the Col. was in May, 1878, when he was brought to St. Elizabeth on the certificate of two physicians to his insanity. In May, 1886, almost exactly eight years later, I parted with him for the last time, to hear within three weeks of his death. Just turned of forty when I first knew him, and, looking only on that magnificent physique with which Nature had endowed him, he would pass for a young man. Scrutinizing more closely you saw that the arcus senilis had come, the vital energies burned down, the wit was at its dregs, and in every sense was it true that the virtue had gone out of him. There was left only an insane thirst for whiskey, and, what his uncle in a conversation with me once styled "his fatal facility in writing." The latter, although deteriorated with all the rest, still afforded him, as a newspaper hack writer, a precarious income from his articles. These were society articles of the lightest sort, but with now and then a scintillation of the old wit which still "set the tables in a roar." All else was gone; property, if he ever had it, positions of trust which he had held and lost by his vices, and "troops of friends" that he had alienated; for this Bohemian prince of dead-beats was as supremely selfish a man as I have ever known. The affection of two wives had been wasted on him; the devotion of the last, which was something inexplicable, availed no more to turn him to virtuous courses than signing the temperance pledge did to wean him from his cups; and the influence of both had less restraining power over him than the lightest whiff from his cigar. As the typical reformed inebriate he was the making and the undoing of I know not how many temperance organizations. Of the various antidotes for drink he was the universal solvent; the thirst within him was his one strong point, the only thing that waxed not old.

What was the disease? Looking for intellectual insanity, you did not find it; yet there were observed phenomena psychic in character worthy of note. When first received, and so long as the alcohol was circulating in his tissues, there was more or less incoherence and confusion of ideas, but apparently no more than would follow a debauch in any one. Then came a period of rest, when everything was first class and he apparently at peace with all the world; was even tolerant of the vagaries of the insane patients about him; life was a pleasant jest, and his comfortable shelter in an insane hospital the greatest

[1] Read before the Medical Society of the District of Columbia, December 11, 1886.

joke of all. Then came a time when life was real and of a very bitter earnest. Sore-headed was no name for it; he found fault with everything; complained of his food; abused his wife; maligned his nurses; made even the unfortunate insane who came within his reach, miserable by one diabolical device or another; then claimed that his own life was being made wretched by being immured with grinning, idiotic lunatics, and attendants of a still lower order of intelligence. Still held in durance, he would, after months of enforced abstinence, his periodic cravings for rum remaining unsatisfied, become moody, dull, almost imbecile, as if a kind of mental dry-rot had come over him. Now let the opportunity be given him to rouse his brain and liver by a fortnight's debauch and its accompanying abstinence from food; the old life would come back; the wit sparkled again, and, with Bulwer's Margrave, he felt the elixir tingling in his veins, for

> "Like to the Pontic monarch of old days,
> He fed on poisons, and they had no power,
> But were a kind of nutriment."

From a moral standpoint the mental obliquity, not to say aberration, was simply appalling. This was by no means exceptional in the Col.; it is the key-note to all these cases of inebriety, but I take him as the illustration, and remarking the keenness of his wit and the correctness of his observation, associated as it was with the most utter disregard of his own best interests, and his complete helplessness in the presence of stimulants, I wondered how long, even with the support of the certificate of insanity from two eminent physicians, I could hold him against a writ of habeas corpus, brought before the tribunal which, in the Guiteau case, had pronounced a knowledge of right and wrong to be the true criterion of responsibility, and that regarded moral insanity as only a synonym for depravity. So, doubtingly, I often let him go.

"Not as other men are,"—but leaving to you, as medical men, to say what ailed him, let me rapidly outline his eight years' record at St. Elizabeth, premising that this was only about one-third of a career as completely bounded by whiskey as the world of the ancients was by the ocean. In that period of eight years the books of the hospital show that he was sent to the institution no less than ten times as insane; the insanity was certified to by two physicians; and once he remained for a considerable time on a voluntary commitment. The time thus passed with us amounted to two years and four months, or something less than one-third of the whole period. There were also voluntary visits, of short duration, where no record was kept. It is safe to say that during the eight years he was for an equal length of time "sobering up" in one of the city hospitals, the work-house, the alms-house, or the sheltering arms of some other eleemosynary institution. It was during a stay in one of these havens of rest, already becoming restless for a drink, that he writes he had "now run the gauntlet of all the institutions (naming them) except a lying-in establishment, of which he yet hoped to find one sufficiently respectable for him to enter, unless, as he feared, he should be found physically disqualified for the situation."

Seeing how large a portion of these eight years was passed in institutions of one kind and another, one wonders when he was sober, just as his frequent appearance at the bar of the police court led Judge Snell to exclaim, "Col., are you always drunk?" To which, with the gravity of a pundit, the Col. replied, "Does your Honor take me for a millionaire?"

There was a noticeable periodicity about the Col.'s infirmity. Remaining at the hospital, as a general rule, only so long as he could be induced to remain voluntarily, it is instructive in our pathological study of the case to note how frequently, after a residence and abstinence of but little more than a month, "important business" made it imperatively necessary that he should return to the city and "his wallowing in the mire." Of his eleven recorded sojourns with us I find six of duration as follows: two of one month and seven days each; one of one month eight days; one of one month twelve days; one of one month eleven days; and one of one month four days. The two longest detentions, seven months and twelve days, and four months and five days, respectively, were both after strenuous voluntary efforts for his own commitment, and were associated with a long preliminary training in police court and work-house. There were times when he was anxious to get into the hospital—and accomplished it against decided opposition—as at others he was as anxious to get out. He always went forth confident in his strength; he came back like the prodigal in his weakness, but with this difference, that the hospital authorities soon got over ordering *veal* on his arrival.

Running over my letters and memoranda of that period, I find "the old, old story," with endless repetitions, from which I make a few extracts as samples: (Before going out.) "My affairs have got to a point now where I *must* lay hold of them and straighten them out. . . . As far as whiskey is concerned (I find I must refer to the subject, nauseating as it is), you need have no fear," etc. (After going out.) "He appreciated your kindness as much as I do, and if he hadn't 'fallen by the wayside' we would have come over to pay you a visit; but before he got time to exhibit his sobriety he got drunk." (Some time later.) "Dear Doctor: The poor soul —I think I may reasonably say—*which* accompanies this note, left Providence Hospital on last Saturday week and took his old room, donned his new forty-five dollar suit, and got drunk. At two o'clock they had to send for the police. He broke the front door, assaulted the cook and the chamber-maid, and produced general hilarity. He has been thoroughly dead drunk ever since (not eating anything as far as I can learn); sleeping up an alley in preference to a bed; and has been three times arrested. . . You will see his condition. He has been in the station for thirty hours, and is rational. For the Lord's sake keep him over there for the rest of his life."

So I might go on for an hour illustrating the varying phases of his infirmity from correspondence and note books, but with my limited time a single episode—that of the Montana trip—must suffice:

In January, 1883, an army officer, moved by I know not what good impulse, secured a fairly remunerative position for the Col. in the Quartermaster's Department of the U. S. Army, station to be in Montana. It is needless to say that our hero was overjoyed. Thenceforward there were to be no more spicy letters from "our occasional correspondent," dating nominally from Saratoga, from Newport, or from the Thousand Isles, but really written within the purlieus of a lunatic hospital. And there were "to be no more cakes and ale." Here was an opportunity to redeem himself or perish in the attempt. I thought it would be the latter, for in the dead of winter and the destination Montana, I felt morally certain that he would freeze to death on the road. He left the hospital on Thursday to make the necessary preliminary arrangements to start on Saturday night for his destination. I need hardly say that one of these preliminaries was to get so drunk on Friday that he was brought to the station house in the evening perfectly unconscious. He got out later, was found asleep on the floor of the telegraph office, and again gathered in. A devoted friend writes: "He hurried off on Saturday night but illy equipped for his five days' journey, promising to write from Chicago. I haven't heard a word, and I believe he is drunk, or dead, or *both*," and adds, "I never expect to see him again, but if *I* do *you* will." We felt that at least St. Elizabeth was done with him. Like Mark Twain watching the Arab on his foot race up and down the pyramids, I said now he *will* slip, now he *must* break his neck, certainly in that all day ride in a coach in Montana, with a temperature of 40° below zero, he can't fail to freeze to death. But he didn't; other passengers were lifted out stiff and frosted, but alcohol will not congeal. In a letter from a hospital of the Sisters in Montana he says of his journey: "At Deer Lodge I strengthened the garrison with a quart bottle in my overcoat pocket. The result was I arrived at Helena dead broke down from fatigue, cold, want of food and sleep, and the awful and to me hitherto unknown poisons in Rocky Mountain whiskey." But though he did not freeze, he was at once in hot water with the military authorities. It was on Gen. Terry's request to be relieved of the Col.'s presence in his department that Gen. Sherman wrote this famous endorsement, which appeared in the daily press at that time: "This man was appointed for the purpose of developing the latent good which is supposed to be in him. Let him be subjected to a severe course of discipline; send him to jail; put a ball and chain on him; shoot him if necessary, but don't discharge him." Nevertheless, he was discharged, and like Mark Twain's Arab, he brought up at the starting point. As the officer helped him out of the ambulance at the portals of St. Elizabeth, I said: "Well, Col., I didn't expect to see you here again." Pretty drunk, but with all the old time assurance, he replied: "All roads lead to Rome, doctor."

His last residence at St. Elizabeth was one of his longest. After much buffeting he had procured for himself the necessary order of the District Commissioners admitting him to the hospital. He came, to use his own expression, "to have us grow a moral nature in him as a man would grow a moustache." There was sore need of it, for "the keepers of the house" had begun "to tremble, and the strong man to bow himself." So he rested for the winter. I committed the entire management of his case to my able assistant, Dr. Stack, promising that he should have all the credit if he cured him. I gave him *carte blanche*—he might put the batteries on him; soak his brain in hellebore; purge him with hyssop; cleanse his heart—do anything and everything, so only he resuscitated his moral nature. It is needless to say that the doctor did his level best, and in the spring told me he thought the time had come to test the Col.'s strength by sending him to town unattended. He went, and came back *sober*. A second trip, and wonderful to relate, he returned as *perpendicular* as he went. I said to myself, Has the growth indeed taken place? Is it possible that there was any moral nature left to grow? And has the change really come that I did not look for before the resurrection? And even then, while I wondered, there came into his brain a scheme for getting aid from his uncle and going on a ranch in the far West to commence life anew, and he began to talk of removing to the city to make his arrangements. Then I knew what was coming. I urged him to remain where he was and leave to others to make his arrangements. But he had reached the time when he wanted no advice; so we parted, he going on his own wild way to the end.

He was born with godlike faculties, but he drank of the cup of Circe till it transformed him to a beast. I know not what vice of organization, what inherited taint or what sinful indulgence first wrought this woe. Whatever it was, he was so hopelessly enmeshed in its folds that from the first time that I saw him his moral responsibility was, to say the least, an open question. If it was sin, has he not suffered for it? If it was disease, shall not the sufferer rest? I like to think of him at his best in a life that had but little best to recommend it. He was better than he wished to seem. I have seen him take slyly from his pocket and give to the dog who accompanied him on his morning walk portions saved from his own breakfast, and then apologize for what might seem a human weakness. Let us, in our human weakness, each cast a shard above him for sweet charity. Taken from out the freezing alleys and gutters where he had so often lain in this world, I hope that burning thirst has not followed him whither he has gone, and I cannot think of him as lying cold o' nights.

I have not given you here an exceptional case; Washington is full of them. I doubt not they are within the experience of every one of my audience. Treating it only as a pathological specimen in this necessarily fragmentary and hurried sketch, I have left unrevealed the tragedy in the home, but it is there none the less. And that is the most moving, realistic side of all these cases. Every month—nay, almost every week, they come to me to know what they shall do that their friends may be saved? Alas! that I have no answer I can give. Mothers bring to me their breaking hearts in confidence that I shall not profane here; wives with a devotion which tells

me the age of martyrdom has not passed; sisters with streaming eyes implore me to save their brother —my brother and your brother too. It is time that as medical men we had some answer to make to this question, What shall be done with them? As scientists curious of the bacillus we forget the worm of the still. As *savants* we show a pardonable enthusiasm over the shards of a jug on which we may with laborious pains decipher the symbol of Annubis or Osiris, but manifest an inexcusable indifference to that human "treasure" which we have in these frailer than "earthen vessels" on whose shattered fragments we might still trace the lines of the image once stamped there. It is time that the scientist and the scholar spoke; that he turned from the contemplation of cliff dwellings and bone caves, and drew out from dens of infamy and caverns of despair where he has been hiding this troglodyte of our time. When the medical men of the community move in earnest in this, we shall have public sentiment, and out of that sentiment will come law, and an answer to the prayer, "Lord, that I might be healed."

NOTE. Let me venture a word in a foot note touching the solution of this problem, lest I be accused of leaving my moral lesson without a moral.

The inebriate can be controlled legally in one way or another; there is no doubt about this. For a person who cannot take care of himself the law provides a guardian; or when a man from any cause so far loses self control as to become dangerous to others, society has the right to restrain him. Such dangerous person, either *in posse* or *in esse*, is the inebriate; and at all times he is unable to take care of himself.

Having shut him up, the next thing is to keep him. Hitherto the detention has been too short to afford a chance for reformation. Sentences for thirty days rather aggravate the craving for drink. For any lasting benefit a year's confinement is necessary with some, a lifetime with others. The commitment in confirmed cases should be for a term of years, with a power lodged in the court committing, and perhaps also in the board of managers of the reformatory, to grant furlough or ticket-of-leave, its continuance to depend on good behavior.

Such house of detention should be self-supporting or as nearly so as is possible to make it with a system of compulsory labor. Since idleness is a great incentive to drink, all able bodied inmates should be set to work at some productive industry. Whatever the institution falls short each year of being self sustaining should be made up from the District treasury out of funds received from licenses for the sale of intoxicating drinks.

The entire management of the establishment should be under the immediate control of an executive officer who should be a medical man skilled in his profession, with qualities of heart and brain fitted to his work, and an autocrat in his position. He will need the wisdom of Solomon, the patience of Job, an abiding hope and a double portion of that "charity which never faileth." Anything short of this will land him within five years in a lunatic asylum, and his institution in the slough where some so-called inebriate homes are already stranded.

In a majority of these cases a cure is hardly to be expected, for the malady is of many years', often of some generations', standing. But will it be a light matter to have made these inebriates decent, orderly, and self-supporting in industrial schools while they live, and to have taken their children out of the blight and shadow of a drunkard's home, and given them back their birthright? And for that "saving remainder," fallen but not lost, going forth restored, whose lives from ruined prospects and dead hopes shall rise again—with what line will you measure, in what balances weigh the value of such refuge to them?

CANNED FOODS AS A CAUSE OF ACUTE POISONING.

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When we take into consideration the enormous amount of canned foods put up and consumed each year, and the comparatively few cases of poisoning, both real and imaginary, that have been attributed to the use of canned foods, we ask the question, Is the use of canned foods injurious? 500,000,000 cans of food are annually consumed as follows:

Of salmon	an	average	per	annum	of.....	50,000,000 cans.
"tomatoes	"	"	"	"	".....	52,000,000 "
"corn	"	"	"	"	".....	30,000,000 "
"peaches	"	"	"	"	".....	15,000,000 "
"meats, oysters, fruits, vegetables, etc.....						253,000,000 "

In vegetables alone there are about 400 farms that have small canning factories, putting up the products of the adjoining land fresh from the fields. Adding these to the number of regular canning factories, we have about 800 in all. These figures do not include the canning of fruits, vegetables, etc., by families for their own consumption, which would increase the amount to a considerable extent.

Before coming to any conclusions regarding the injurious effects of canned foods, it will be necessary to consider the various materials out of which the cans are constructed as well as the composition of the contents of the cans. We will not consider the foods canned in glass, but will devote our attention to the foods put up in tin cans. Tin-plate is the form in which tin is used in canning food. It consists of thin sheets of iron covered with tin. There are several methods by which tin-plate is made, the usual one being about as follows: The very best refined sheet iron is first cleared of all oxide by immersing in dilute sulphuric acid, then rubbed dry with sand to remove all traces of the acid. It is then plunged successively into a bath of melted tallow and a bath of tin covered with tallow. On contact with the iron the tin forms a true alloy, which is covered with pure tin. The cheaper grades of tin-plate are dipped once or twice, while the best goods are dipped three times. One pound of tin will make twenty-eight plates of tin-plate 14 × 22 inches, and of the best grade. Commercial block tin, such as is used in the manufacture of tin-plate, usually contains various other metals, but in such small quantities that, with the exception of lead, they are never found in the contents of the can, so we will not consider them.

A large quantity of tin-plate is made from an alloy of tin and lead, the proportion of lead varying from 1 to 50 per cent. or more. A grade containing about 10 per cent. of lead is as poor as is generally used in making cans. The greater the proportion of lead, the cheaper the tin-plate. This alloy of lead and tin is more easily acted upon by the vegetable and fatty acids than pure tin. The principal examiner of chemicals in the U. S. Patent Office says that all commercial tin is alloyed with lead. Chemists who have examined cans for alloy of lead and tin find lead in almost every case. Dr. Onderdunk finds only two samples free from lead in a great number examined.

Dr. Darsh reports that out of a large number of cans tested, he found lead alloyed with tin in almost every case. Dr. Dagget has examined twenty cases of different brands and found lead alloy in every can. I have examined a great many different brands of canned foods, also the very best brands of charcoal tin used by our tinners, and found lead alloyed with the tin in every case; not one was free from lead. The most convenient test for lead alloy is to place a few drops of a weak solution of nitric acid (1 to 10) on the tin-plate and allow it to remain a few minutes to react on the metal. If lead be present the nitrate of lead will be formed, and by placing a small crystal of potassium iodide in the centre of the acid, the characteristic yellow iodide of lead will appear. The chemical changes may be expressed by the following equations:

(a) $Pb + 2HNO_3 = Pb(NO_3)_2 + H_2$.

(b) $Pb(NO_3)_2 + 2KI = PbI_2 + 2KNO_3$.

If the tin is pure there will be no change of color on the addition of potassium iodide.

The ordinary solder used in the manufacture of tin cans is an alloy of tin and lead. Three grades of solder are in use: common solder, consisting of equal parts of tin and lead, fine solder, composed of two parts of tin to one of lead, and "coarse" solder, containing one part tin and two of lead. The old hand-made can was soldered from the outside, and rosin used as a flux. It was soon found that the work could be done faster by soldering on the bottom and top from the inside, still using common solder and rosin. Still later it was discovered that the same work could be done faster and cheaper by using a liquid flux, consisting of chloride of zinc and water. The caps are usually soldered on by means of the chloride of zinc flux. Some of this frequently finds its way under the cap and into the contents of the can. The Legislature of Maryland has passed a law prohibiting the use of this flux in canning foods. There has been a great deal of groundless prejudice against the use of machine-made cans. An attempt has even been made to boycott all cans made by machinery. I have tested samples of the tin plate, solder and flux used by one of the largest manufacturers of machine-made cans, and find the materials to be practically unobjectionable.

It would be impossible to give the analysis and composition of all the foods preserved by the canning process. Most, if not all of them, contain organic acids of either the vegetable or fatty acid series. The acids found are either natural in the fruits, vegetables or meats, or are the result of chemical change. In replying to the question, "Is the use of canned foods injurious?" we must take into consideration not only the tin-plate, solder, and flux used, but also the nature and composition of the food in its natural condition, and after partial decomposition has taken place. When we take elementary substances alone we find them harmless, as a rule. It is when new combinations take place, or old compounds are decomposed and poisonous ones are formed as the result of recomposition, that we look for harm. In the substances mentioned we have tin, lead and zinc present as baselous or positive radicals, and chlorine, vegetable and fatty acids as acidulous or negative radicals. From these we can have tin chloride or tin salts of the organic acids, lead chloride, or lead salts of the organic acids, or we may have zinc chloride or zinc salts formed by the union of zinc with the organic acids. Rosin used as flux does not combine with any of the metals; it is only when a liquid flux containing chlorine or a chloride is used, that we may have all of the above combinations. If chlorine or a chloride is used as a flux which of the metals, tin, lead or zinc, will it combine with? There is a law of chemical affinity known as "Bartholet's Law," as follows: "Whenever, on mixing two substances in solution, a compound can be formed by a rearrangment of their atoms, which is insoluble in the menstruum employed, such a compound will be formed and will appear as a precipitate." The liquid or juice in canned foods consists of water and in most cases of an acid. Chloride of zinc is soluble in water and acidulated water. Stannic chloride is soluble in water and acidulated water, stannous chloride in acidulated water. Lead chloride is almost insoluble in water and acidulated water. According to the law of Bartholet, the chlorine would enter into combination with the lead, and if in considerable quantity would be precipitated. Our works on toxicology do not mention lead chloride as a poison. The chlorides, oxides, hydrates and organic salts of tin, lead and zinc have never been found in sufficient quantities to give rise to the symptoms sometimes produced by eating canned foods. They have never been found in as large quantities as some of our textbooks give as the medicinal doses of these same salts. And again, we find that the symptoms of canned food poisoning differ materially from the toxic effects of the metallic salts.

The following symptoms have been recorded as occurring in acute poisoning from canned foods:

Brain—Headache, throbbing of temples, vertigo, delirium, stupor, coma.

Face—Livid.

Eyes—Red, suffused, lids swollen, pupils dilated.

Tongue—Fiery red, heavily coated.

Throat—Dry, burning sensation, extreme thirst.

Stomach—Want of appetite, repeated eructations, nausea, retching, violent vomiting, both bilious and alimentary.

Bowels—Tender, painful, griping, diarrhœa, violent colic, gastro-enteritis, very offensive stools, bloody stools, dark tawny liquid from bowels, stricture of rectum and colon, tenesmus, prolapse of rectum.

Respiration—Alternate strangulation and paralysis of lungs.

Temperature—Normal, 101° to 105° F.

Pulse—Weak and slow, thin, thready, 100 to 150.

Integument—No heat of skin, skin hot and dry, profuse sweating, fiery red eruption all over body, intolerable itching, rough skin, greenish or yellowish patches.

Kidneys—Urine scanty, loaded with urates, no sugar nor albumen.

Muscles—Convulsive tremors, all movements painful, cramps of thighs and legs, epileptiform convulsions, partial paralysis of extremities.

General Symptoms—Cross, irritable, great languor, extreme weakness, typhoid condition, cold extremities, etc.

We find most of these symptoms in cases of poisoning by the narcotic alkaloids of hyoscyamus, conium, stramomum, etc. The symptoms of acute poisoning by canned foods are not such as we find in corrosive metallic poisoning, but are such as would arise from the action of some substance having especial effect on the nervous system.

If poisoning does occur from eating canned foods, and does not arise from the tin-plate, solder, fluxes, or organic acids or their combinations, where does the poison come from, and what is its nature?

Putrefaction is the spontaneous (so-called) decomposition taking place in nitrogenous substances. As the result of this process we have artificial alkaloids, and extractive matter formed. Alkaloids are alkaline or basic substances found in organic matter. The *natural* alkaloids already exist in organic substances; the artificial alkaloids do not pre-exist in organic substances, but are the results of chemical changes, generally that of decomposition. When artificial alkaloids are formed by the putrefaction of dead animal matter they are called "ptomaines," or "cadaveric" alkaloids. When they are formed by the decomposition of animal matter under the influence of life force, they are called "leucomaines," or "animal alkaloids." There has also been discovered in both living and dead animal matter non-crystallizable nitrogenous matter, called extractive matter. All of these three classes of animal nitrogenous substances are highly poisonous even in very small quantities. The extractive matters possess great toxic properties. The leucomaines are not found in canned foods. There is little doubt that the artificial alkaloids are the cause of poisoning in canned foods. The ptomaines have been found in canned meats. They are produced by putrefactive changes that take place in the meat before being canned, or may be developed in the can if it be imperfectly canned; or they may be formed after *opening* the can and exposing the contents to the atmosphere.

Lengthened putrefaction destroys the ptomaines. Brieger, in his great work on "Ptomaines," gives the results of his investigations:

1st. The ptomaines of gastric fibrin.

2d. The ptomaines from the putrefaction of albuminoids.

3d. The ptomaines from the putrefaction of mammalian flesh.

4th. The ptomaines from the putrefaction of fish.

5th. The ptomaines from the putrefaction of cheese.

6th. The ptomaines from the putrefaction of gelatine.

7th. The ptomaines from the putrefaction of yeast.

He also gives a full description of his chemical results and physiological experiments. The following are the names and chemical composition of the ptomaines examined by him:

A. Peptonized Fibrin.—A toxic substance was obtained from this called *peptotoxine*. Its chemical formula was not discovered.

B. Albumoids.—The same substance was discovered during the putrefaction of albumonids.

C. Putrid Mammalian Flesh gave two ptomaines. Neuridine ($C_5H_{14}O_2$), and neurine ($C_5H_{13}NO$), both of which are crystallizable and form salts.

D. Putrid Fish, from which five ptomaines were obtained:

1. Neuridine.
2. Ethylene-diamine. $C_2H_4(NH_2)_2H_2O$
3. Muscarine. $C_5H_{15}NO_3$
4. Gadinine. $C_7H_{17}NO_2$
5. Triethy-amine. $N(CH_3)_3$

E. Putrid Cheese.—This yields the following bases:

1. Neuridine.
2. Trimethylamine.

F. Putrid Gelatine gives three ptomaines:

1. Neuridine.
2. Dimethylamine. $(CH_3)_2HN$.
3. Isophenylethylamine. $C_8H_{11}N$ (but not well established.)

G. Putrid Yeast yielded dimethylamine.

But few of the alkaloids and extractive matters formed by the decomposition of vegetable matter have been examined, but they are known to exist and to be very poisonous.

The symptoms of poisoning arising from eating canned foods are identical with those produced by putrefactive alkaloids and extractive matters. When sudden illness takes place after eating canned food it is usually attributed to metallic poisoning.

In a paper read before the Medico-Legal Society of New York, April 9, 1884, and published in the *Medico-Legal Journal* of June, 1884, Dr. J. G. Johnson reports six cases of poisoning from eating canned tomatoes. He attempts to prove that in these and all other cases of poisoning from canned goods, the poisoning comes from the metals, losing sight altogether of the possibility of poisoning by putrefactive alkaloids or extractive matter. He says: "Even if the tomatoes had begun to spoil she (the housewife) had cooked them, and cooking would have cured them. Putrefaction and decay, instead of being death, is really giving birth to myriads of little living plants. Now heat kills all of these ferments, and if the food had commenced to decay heating would have removed that danger." He does not even mention the possibility of artificial alkaloids or extractive matter. With many others, he seems to be under the impression that the toxic symptoms must necessarily be caused by a metal or a microbe. Now, heating to the boiling point, 212° F., will destroy all organic germs, but not all the alkaloids. It is no wonder that Dr. Stevenson, of London, in speaking of Dr. Johnson's paper, says: "Dr. Johnson arrives at very positive conclusions on altogether insufficient data, and he has failed to grasp the chemistry of the subject on which he writes."

When a number of persons are taken sick after eating foods that have not been canned, the food is analyzed for the purpose of ascertaining what poison has been introduced into the food by some malicious person. Failing to find metals or natural alkaloids, the case is reported as one of mysterious poisoning. Cases of this class are reported nearly every day by the public press. Poisoning of wedding and other parties from eating ice cream, made in old freezers

with portions of putrid milk adhering to the creases and corners of said freezers, are known to all of us.

On May 5, 1884, Professor Attfield, of England, read a paper before the Pharmaceutical Society, detailing a large number of analyses of sixteen varieties of foods, in which he arrives at the following conclusions: "The public has not the very faintest cause for alarm respecting the occurrence of tin, lead, or other metal in canned goods."

Dr. Thos. Stevenson, Government Toxicological Analyst, London, in an article on "Poisoning by Canned Foods," read before the Medico-Legal Society of New York, on November 19, 1884, says: "Acute metallic poisoning by canned provisions is not known to have certainly occurred in this country. I have been Government Toxicological Analyst for thirteen years, and have never met with acute metallic poisoning by canned foods."

In conclusion, if care is used in canning foods, and they are not allowed to decompose before or after canning, they will not give rise to acute poisoning.

HÆMATEMESIS.[1]

BY SAMUEL S. ADAMS, M.D.,
OF WASHINGTON, D. C.

In offering for your consideration a case of hæmatemesis, I have nothing unique to present, nor is there anything new in its pathology or morbid anatomy. The interest in the case is mostly centred in the rapidity with which the bleeding stopped after the administration of the hæmostatic, and the speedy reaction from impending collapse.

Miss O'K., aged about 26, a brunette, of Irish parentage, with an excellent physique and high color, was taken ill October 31, 1886, but did not have any medical advice until I was summoned to see her just after a profuse bloody vomit on the evening of November 1. Her family history does not point directly to a hæmorrhagic diathesis, although some years ago, in the case of a sister, I had great difficulty in controlling a profuse and alarming hæmorrhage from the gums, following the extraction of a tooth, which had continued forty-eight hours. Her mother died of consumption; her father is said to have died of Bright's disease; and a brother of apoplexy following yellow fever.

From her infancy she had always been considered delicate, but cannot recall any sickness until 1881, when she was taken ill just as in the present attack. She had apparently been well and was engaged in household duties when she was suddenly nauseated, and soon after vomited a large quantity of blood; she vomited blood a second time that day. During this illness she was confined to her bed for one week, but did not regain her strength and vigor for several months. From her recovery to the present she had enjoyed excellent health, with occasional slight attacks of indigestion. She began to menstruate quite early; the periods and flows have always been normal, and she has never had any uterine disease. She has no history of vicarious menstruation; she has had teeth extracted without excessive bleeding, and she has never had nose-bleed.

Only words of commendation can be spoken of her ambition and industry, which have led her into irregular habits of living and to an almost absolute disregard of the rules for the preservation of health. It has been her custom to sit up until 1 or 2 o'clock at night engaged either in reading or fancy work. She would go to her office after taking a cup of coffee, and never more than one biscuit. She has been compelled to sit all day on the ground floor of the worst ventilated of the Government buildings writing letters. In the half-hour allowed her at noon she would hurry home, eat a very small luncheon, and frequently run back to her desk. She would dine at 6 P.M., when she usually ate a hearty but not an excessive meal. Her bright color, powers of endurance, cheerful disposition and apparent good health have excited the admiration and envy of her female friends. Whenever they would admonish her for disregarding the hygiene of life, she would reply that she was always well. On one occasion when she was boasting of her good health in spite of her irregular mode of living, the writer warned her that nature would not always be so obedient to her wishes, but would ere long assert her rights. Little did he think then that the prediction would be fulfilled so soon.

For a few days she had had "sour stomach," belching, suffocative feelings, pain in the back of the head and in the cardiac region which almost made her faint, and was very sleepy most of the time—all of which she attributed to "dyspepsia and biliousness." On October 30, after taking her usual breakfast, she went to a studio where she painted for seven hours. She returned late in the afternoon feeling very tired, but ate a good dinner and then repaired to her room, but did not retire till after midnight.

October 31. She did not get up until 10 A.M., when she felt very uncomfortable from a feeling of oppression in the epigastrium which she thought was indigestion. At breakfast she only drank a cup of coffee. She remained in the parlor till 1 P.M.; then went upstairs and took a warm bath and dressed for dinner. She now felt very weak, but thought it was from hunger, as she had not had a bit of solid food for twenty-two hours. While seated at the dinner table waiting for her soup she was seized with a feeling of suffocation, nausea and dizziness. She left the room and went into the parlor to her sisters. They, supposing that she was about to faint, procured some hot water, which she drank. In about ten minutes she became very much nauseated. She went up to the third story of the house, where she vomited seemingly a pint of blood. This frightened her, but she was quieted by her sisters, who expressed the opinion that the blood was from the nose, as it came from that passage as well as from the mouth in the effort of vomiting. She then went to her room and rested till 6 o'clock, when she felt somewhat better; she would have kept to her bed but for the solicitations of one of her sisters, who was anxious to see her in a new dress; so she put it on and went to tea, but could not eat. She remained in the parlor until

[1] Read before the Medical Society of the District of Columbia, November 10, 1886.

8, when she went to the fourth floor; soon after she was taken sick again with oppression, nausea, and cold clammy sweats, but did not vomit. She then went up another flight of stairs to her room, went to bed, and slept well all night.

November 1. She tried to get up at 10, and again at 12 o'clock, but could not dress on account of an indescribable feeling of weakness and faintness. Later in the day she tried to dress several times, but failed. At noon she was served with toast and tea, but partook sparingly of them. The nausea having returned every time she raised her head from the pillow, she was convinced by her sisters that she was "bilious," so she took a wineglassful of Hunjadi water, which operated very freely about 5 o'clock. Just after the stool, while combing her hair, she again vomited blood. She then walked down a flight of stairs to send a message to me, and back again. She "thought she would die" before she could get into bed again.

I found the patient ashy pale and sweating profusely; her voice was scarcely audible; her pulse about 140, small and compressible; respirations sighing, and she complained of a suffocated feeling. In the "slop jar" I found at least a pint of dark blood which had not coagulated. She said that from the appearance of the stool it also contained blood. There was no acute pain, but she felt exhausted. She had no cough, and insisted that the blood was vomited. I auscultated the chest thoroughly, but found the normal vesicular murmur. My attention was called to a dull, gnawing pain just under the ensiform cartilage which was not increased by pressure. I was now satisfied that the blood came from the stomach, but the nature of the lesion was in doubt. There seemed to be no hæmorrhage from any other viscus, and as the intervals between the vomitings were so long, I felt certain that I had a simple ulcer of the stomach to treat.

The patient reacted so promptly that stimulants were not indicated. I ordered a mixture containing gallic acid, fld. ext. ergot, aromat. sulphur acid, syrup and aqua to be taken every two hours. Rest in the recumbent posture was strictly enjoined; cracked ice *ad libitum* allowed, and milk and lime water in small quantities, frequently repeated, were ordered.

9 P.M. I found the patient recovering from an attack of hæmatemesis. Her condition was described to me by her attendants about as I have detailed above. She had vomited more than a half pint of blood, which was less disorganized than that previously seen. This attack was induced by getting up to stool. This evacuation also looked as if it contained blood.

November 2, 3 A.M. I was called to see her because she had vomited blood again. She had slept very quietly since about 10 o'clock, but by getting up to use the *commode* she had brought on another attack. The quantity this time was fully a pint; the blood was more disorganized than the preceding, but did not coagulate. Her general condition was about as that described in the previous attacks. By the time I reached the house the syncope had passed away.

Early the previous night, when speaking to Dr. Busey about the case, he had advised the administration of the tinct. ferri chloridi if the medicine she was then taking did not control the hæmorrhage. In recommending this drug he remarked: "If it is given immediately after the vomiting I have never seen the hæmorrhage recur." In accordance with his suggestion the drug was procured in about an hour after the vomiting, and a half teaspoonful, in water, was then administered. She was instructed to remain in bed in the recumbent posture and, if necessary, to use the bed-pan. The cracked ice was continued; 20 drops of the iron to be given every two hours, and in case the hæmatemesis recurred, a half teaspoonful immediately thereafter.

8 A.M. The patient slept quietly until 6 o'clock, when she again vomited about a pint and a half of partly coagulated blood. Just as soon as the nausea had passed away a half drachm of the iron was administered. From that time there has been no evidence of hæmorrhage.

10 A.M. Dr. Busey saw the patient with me, and emphasized the importance of absolute rest and quiet, recumbency, milk and lime-water, cracked ice and small doses of iron, or in case of hæmatemesis the larger dose—the directions that had already been given. The iron was continued for several days in 20-drop doses every three or four hours, and then stopped. The patient gained strength and color very quickly; was permitted to sit up on the 8th, and was given soft bread and the juice of tender broiled steak.

The etiological factors in this case correspond with those laid down by Dr. W. H. Welch.[1] The irregular mode of living; the insufficiency of food; the exposure to bad hygienic surroundings; and the overtaxing both of body and mind, undoubtedly favored the ulcerative process. The present attack of hæmatemesis, it seems reasonable to suppose, had its exciting cause in the great mental and physical strain to which she had been subjected during the twenty-four hours preceding the first vomiting.

From the previous history; the chronic dyspepsia; the localized pain after eating; the age and sex; the bloody stools; the oppression and nausea; and finally the vomiting of blood—which recurred at varying intervals—surely make the diagnosis simple.

The prognosis was favorable during the illness because the patient rallied so quickly after each hæmatemesis, without the use of stimulants or external heat. If, however, the prognosis had been based on the loss of blood instead of on her powers of recuperation, it would have been very unfavorable. Still another element in the favorable prognosis was the prompt action of the iron in checking the hæmorrhage.

In the treatment of the case there is much to be gained. The mixture that was given at first apparently had no effect in controlling the hæmorrhage, but its failure may have been due to the patient getting out of bed to use the *commode*. When the iron was begun early in the morning an hour had passed since the patient vomited, and undoubtedly some blood had effused into the stomach, thus pre-

[1] System of Medicine, Pepper, vol. ii, p. 480.

venting its speedy action. After she had vomited the last time, at 6 A.M. November 2, Dr. Busey's advice "to give the iron immediately after the vomiting" was carried out, and his prediction that the hæmorrhage would be arrested was fulfilled. This method of treatment seems to have originated with Dr. Busey, as the books I have examined make no reference to it.

It is important to state that, although the patient took about a quart of milk daily, her bowels were not moved from the night of the 1st until that of the 7th. Enemata of warm water were given for several days, but they were either voided immediately without fæcal matter or else absorbed by the intestinal mucous membrane. The iron is very apt to form scybala and thereby prove a troublesome complication. So long as the tongue is clean and the patient is not inconvenienced by the constipation it is better not to force an action for several days. When the necessity of opening the bowels becomes imperative, great care should be taken to avoid nauseating and drastic cathartics, in order to prevent violent peristaltic action of the alimentary tract. Saline cathartics are the indicated agents in such cases. This patient took on the 7th magnesium sulphate dissolved in aromatic sulphuric acid, syrup and water, which had the effect of clearing the tract by three profuse, watery stools, without exhausting or injuring her.

In conclusion, it is but just to say that the success of the treatment was materially aided by the obedience of the patient and the good judgment and excellent care of her lady friends, who were untiring in their attentions.[2]

1525 I St., Washington, D. C.

EXPLORATORY INCISION AS A DERNIER RESSORT FOR DIAGNOSTIC PURPOSES.[1]

BY R. STANSBURY SUTTON, M.D.,

OF PITTSBURGH, PA.

Many cases will present themselves in which a diagnosis is not possible. It will not be possible to determine anything beyond a certainty that the disease is within the abdominal or pelvic cavity. A tumor may be present; no certainty of its relations may be ascertainable through the closed abdominal wall. What is to be done? Will we satisfy our consciences that our duty is done and turn away, or temporize with drugs? It is to be hoped not. *In every man or woman dying or in danger of dying from an obscure intra-abdominal trouble an exploratory incision should be made and the diagnosis should, if possible, through it, by touch, or touch and vision, be perfected.* Is such a procedure to be lightly undertaken? By no means. But with the following precautions it is safe:

1. Have the patient clean from head to foot, and the surface of the abdomen especially clean, made so by soap and water and a brush. Surround the parts with clean towels fresh from the hot iron.

2. Have your hands and forearms scrupulously cleansed with soap and water and turpentine.

3. Have your instruments clean and immersed in hot water.

4. Thoroughly etherize your patient.

5. Make an incision two inches long; before opening the peritoneum secure every bleeding vessel. Pass in two fingers and make search.

6. If you have failed to gain the desired information, withdraw your fingers, pass in a sponge, locate it directly under, below and above the wound, and enlarge the latter with a clean cut over the sponge, to a length sufficient to let in your hand. Secure all bleeding vessels, withdraw the sponge, and pass in the hand and complete the search. Through such a wound much may also be seen. *Never make a longer cut than is necessary, and make a clean cut.*

7. Before closing the abdomen cleanse the cavity thoroughly, but be gentle in your use of the sponges; if you deem it necessary, pour in a pitcher of clean warm water and wash the cavity out. Gently sponge it dry. In closing the wound, pass the sutures over a flat sponge laid beneath the wound.

8. Reject the use of carbolic acid or bichloride of mercury in your operations; they are useless *and a source of danger.* They may be useful in cleansing your hands prior to operating, *but they are to be kept out of the peritoneal sac.* Keith, Tait, Bantock, and others abroad have proved the worthlessness of carbolic acid, and I have for some time been satisfied from experience that they are right.

9. Never permit any one but the operator to pass a hand into the cavity, unless his hand has been prepared by a careful cleansing with soap and water and brush, and with turpentine or a 1.200 solution of bichloride of mercury. Even a 1 in 20 per cent. solution of carbolic acid is not reliable for this purpose.

10. In tying the sutures, dry the lips of the wound as you go along with a bit of iodoform gauze.

With the above precautions I have opened the abdomen many times, and I have yet to see a single wound so treated fail to unite by first intention.

[2] November 24. The patient is steadily improving, and has resumed her official duties.

[1] Remarks made before the Pittsburgh Gynecological Society, December 2, 1886.

HOSPITAL REPORTS.

MERCY HOSPITAL CLINIC.

Service of DRS. EDMUND ANDREWS AND E. WYLLYS ANDREWS.

A BULLET AND FRAGMENTS OF A KNIFE IMBEDDED TWENTY-TWO YEARS IN THE PERINEUM.

Case 12,710 Andrews' Surgical Record.—This patient was a pontonier under Gen. Sherman in the Atlanta campaign in the spring of 1864. At the battle of Resaca he was on duty as steersman to one of the pontoons used in ferrying troops across a river. A shot from the enemy's side struck him in the right groin, passing through the pocket of his pantaloons, shattering a bone-handle pocket knife, and entering the body about where the femoral vein emerges from beneath Poupart's ligament. Thence it traversed inward, backward, and slightly down-

ward, crossing the perineum, cutting the urethra behind the scrotum, and lodging alongside the tuberosity of the ischium. The man being plucky, continued for a time to steer his pontoon, but the blood flowed so freely that he became faint, and was put ashore, where he lay behind a stump until a lull in the firing permitted his removal to the field depot. He was also wounded in the forearm.

The surgeon in charge of his case failed to discover the bullet, owing to its peculiar location, and dressed the wound as usual. Urinary infiltration and abscess of the perineum followed, which gradually healed, as also did the original wounds in the groin and arm. From that time on there was a constant flow of pus with the urine. Eight years later he passed from the urethra some pieces of the bone handle of his pocket knife, without any material benefit.

Twenty-two and a half years after the battle he appeared at the clinic, much weakened and exhausted, still discharging pus freely from the urethra, and suffering from a stricture of the wounded urinary passage. Examination with sounds showed that instruments turned off from the urethra to the left and ran into a cavity alongside the ischium, where a gritty sensation was felt. There was also a hardness and a tenderness to the touch in the same region.

On making an external perineal section behind the scrotum four pieces of the bone handle of his pocket knife were found, partly covered with a strong crust deposited from the urine. A small orifice ran downward from the main abscess cavity to a pocket nearer the surface, where a hard object could be felt. A separate incision opened this pocket and disclosed the bullet. On extraction, it was found to be an old-fashioned spherical bullet, somewhat battered by its tussle with the pocket knife, and crusted in spots with urinary calculus. The abscess was disinfected and tubed, and the stricture of the urethra opened out to full size. The wounds are now healed and the patient is rapidly returning to full health.

MEDICAL PROGRESS.

BIOLOGO-CHEMICAL PROPERTIES OF MICROBES.—At a recent meeting of the Russian Chemical Society in St. Petersburg, PROFESSOR A. V. POEHL (*Vratch*, No. 8, 1886, p. 157) made a very interesting communication on his experimental study of the vital process of various microbes. The formation of ptomaines in nature, he says, is mostly caused by the vital action of micro-organisms. While studying the microbes of human fæces, the author found that in morbid cases there appear in the intestines several kinds of microbes, possessing the property of decomposing proteid bodies. To use Hoppe-Seyler's words, the decomposing action of bacteria on proteids resembles that of caustic alkalies (while ferments act on proteids like weak acids). Under the splitting action both of bacteria and caustic alkalies, there simultaneously appear the products of oxydation and those of reduction, which fact is explained by decomposition of water (H_2O) into an oxydizing hydroxyl (HO) and a reducing hydrogen (H).

Ptomaines belong to the products of disoxydation. Dr. Poehl succeeded in demonstrating the reducing action of certain micro-organisms on the surrounding nutritive medium during their growth. He recommends taking a neutral nutritive jelly, to which is added 0.05 per cent. of perchloride of iron and 0.05 per cent. of red blood salt (ferric potassium cyanate). Micro-organisms endowed with a reducing power give rise to a blue coloration of the jelly (in consequence of formation of Berlin blue), which commences in the lowest part of the track left by an inoculating needle, but subsequently spreads around in the jelly (since ptomaines, on their being absorbed by the jelly, also deoxydize the latter).

Dr. Poehl examined in that way cholera bacilli brought by Professor Raptchevsky from Spain, typhoid-bacilli, Finkler's and Prior's bacilli, certain microbes of pus and fæces, as well as microbes of water from the Neva. A quite distinct reduction was obtained from the cholera-bacillus, typhoid bacillus, some of the microbes of pus, fæces, and the Neva water, and from "Bienstock's Bacterium," No. 4. But Finkler's and Prior's microbe of cholera nostras gave no reduction, since it does not produce ptomaines (though it freely peptonizes syntonine). Hence the author proposes to use that biologo-chemical behavior as a means of distinguishing between Koch's microbe of Asiatic cholera and Finkler-Prior's bacillus of European. As a rule, micro-organisms liquefying (under ordinary conditions) nutritive jelly do not possess either a reducing power or a power of forming any ptomaines. When present in the intestines, the cholera-bacillus also produces a reducing action on the surrounding medium and leads to the formation of ptomaines (the presence of which in cholera cases has been actually proved by Klebs, Pouchet, Nicati and Rietsch, etc.). The author feels sure that cholera could be usefully treated by the administration of oxydizing remedies, such as chlorinated water, peroxide of hydrogen, salts of permanganic acid, etc.; they are indicated the more strongly, since most of ptomaines are destroyed by the action of oxydizing agents. [Referring to the therapeutic dictum of Professor Poehl, Professor Manassein expresses his doubt that chlorinated water and peroxide of hydrogen, taken internally, could reach the intestines undecomposed.—*Rep.*]—*London Medical Record*, Dec. 15, 1886.

GENKIN ON THE USE OF HYPNOTICS.—DR. M. S. GENKIN, of Kaluga, lays down (*Proceedings of the Kaluga Medical Society*, Nov. 30, 1885, p. 42) the following rules for the use of various hypnotics in treatment of sleeplessness:

1. *Sleeplessness from physical excitement of the brain, or so-called "physical hyperæsthesia from moral causes."*—As a rule, the removal of causal influences and the administration of bromide of potassium prove successful. When the bromide remains inactive, morphine must be given to an anæmic

patient, and ether, chloral, or paraldehyde to a strong one. In the latter, morphia is contra-indicated, since it would only increase "psychical hyperæsthesia" in him, and may even give rise to acute delirium.

2. *Sleeplessness from pain sensations in peripheral nerves.*—Remove the cause; when the latter is unremovable, the best means is a hypodermic injection of morphia.

3. *Sleeplessness from the rise of temperature and cerebral hyperæmia in febrile cases.*—The best treatment consists in giving paraldehyde, in the dose of from 20 to 40 grains. The latter quantity of the drug induces quiet sleep of from four to six hours' duration. Dr. Genkin, generally, thinks highly of paraldehyde, which, according to his extensive trial, is as effective as chloral, and does not produce any unfavorable influence on the heart. In the first period of febrile diseases—that is, before high temperature has produced fatty degeneration of the cardiac muscle and blood-vessels, chloral also may be used.

4. *Sleeplessness from cerebral congestion, depending upon an irregular cardiac action in cases of fatty degeneration, or organic defects of the heart, arterio-sclerosis, etc.*—Paraldehyde should be given. Chloral is strongly contra-indicated even in small doses. Preparations of opium and morphine are also out of place.

5. *Sleeplessness from intense anæmia of the brain.*—Subcutaneous injection of morphine, or aqueous extract of opium, a glassful of wine or beer or aquavitæ *(vodka)* internally, and warm applications to the head, are the best means in the form of insomnia in question. Chloral and paraldehyde remain here entirely inactive.

5. *Sleeplessness from alcoholism.*—In absence of arterio-sclerosis, etc., the best remedy is chloral. Otherwise paraldehyde should be administered. Dr. Genkin emphatically advises the utmost caution and discretion in the administration of hypnotics, since sometimes even relatively small doses of an unduly used drug of the kind may produce disastrous effects. For the sake of illustration, he adduces two instances of the use of chloral in patients with arterio-sclerosis. In one of them, two 15-grain doses were given, one at bed-time, another at noon on the next day. In the evening, after the second dose, the patient suddenly died from paralysis of the heart. Another patient self-administered three 10-grain doses of the drug, at three hours' intervals, and made only a narrow escape. According to the author, chloral and bromide of potassium are used in Russia in truly enormous quantities. Indeed, "bromide of potassium has become almost a food-article in every Russian home."—*London Medical Record*, Dec. 15, 1886.

FRACTURE OF THE THIGH—ABSORPTION OF THE CALLUS FROM ERYSIPELAS.—DR. FERRET reports the case of a youth, aged 17 years, of good constitution, and without taint of disease, who came under observation in February, 1884, for simple fracture of the thigh at its middle. It was treated by continuous extension, and recovery ensued without shortening. In April, after consolidation was complete, the patient contracted erysipelas on a portion of the leg where the skin was abraded by the diachylon used. It rapidly invaded the whole limb, and was very severe. On the sixth day after the outbreak of the erysipelas it was noticed that the limb was bent almost at a right angle at the seat of the old fracture, but there was no pain. The limb was placed in good position, and extension again applied. Within ten days the erysipelas had disappeared; but the patient suffered deep pain at the site of the fracture. Four days after this the region was inflamed, swollen and fluctuating, and a considerable amount of pus was removed by aspiration. Pus reappeared, and four days after the aspiration the abscess was laid open. It was found that the extremity of the lower fragment was adherent to the internal face of the upper fragment. It was replaced, after about 4 cm. of bone were removed, and the suppurating cavity was then packed with iodoform gauzes. The extension apparatus was kept on, the iodoform gauze renewed every three or four days as long as necessary, and by the end of May bony union was again complete.

Cases of this kind are very rare, and may be classified as those in which the callus is only softened, and those in which it is completely absorbed. Of the first class Clarke reported a case in the *Medical Times* and *Gazette*, in 1867, and Poinsot reported a case to the Société de Chirurgie in 1878. Of the second class Norris ("Contributions to Practical Surgery") says that he has seen rapid absorption of a large callus under the influence of erysipelas. Schilling (*Med. Zeitung*, Sep., 1840) reports a case of absorption of callus during typhoid fever. Mantell reports in the *Lancet*, Oct. 9, 1841) a case in which a callus was absorbed at least three months after bony union from the patient contracting an epidemic fever.—*Progrès Médical*, Nov. 13, 1886.

A MODIFICATION OF WEIGERT'S METHOD OF STAINING TISSUES OF THE CENTRAL NERVOUS SYSTEM.—DR. W. M. GRAY, Microscopist, Army Medical Museum, Washington, D. C., says:

The specimens, hardened in Müller's or Erlicki's fluid, are transferred directly (without coming in contact with water) to alcohol 70 per cent. The pieces to be embedded are now gradually dehydrated, advancing from 70 per cent. to 95 per cent. alcohol, and finally to absolute. After soaking in absolute alcohol for several days, they are transferred to a mixture of equal parts of ether and absolute alcohol, and allowed to soak for one or two days; they are then transferred to a solution of celloidin, and are embedded in celloidin on cork. The pieces, fastened to a cork with celloidin, are immersed in a solution of neutral acetate of copper (a saturated filtered solution of this salt, diluted with an equal volume of water), and allowed to remain in an incubator at 30° or 40° C. for one or two days.

The specimens become pea green after the copper treatment, the celloidin mantle more of a blue-green; they may now be preserved in 80 per cent. alcohol indefinitely.

After having made the sections, which must still

be kept clear of water. they are immersed in the hæmatoxylin solution, the formula for which is as follows: hæmatoxylon (Merck's, in crystals), one part; absolute alcohol, ten parts; water, ninety parts; boil twenty minutes, cool and filter, and to each one hundred parts add one part of a cold saturated solution of lithium carbonate.

The time required for staining varies with different specimens; in general, the rule prevails that the longer one colors, the surer the result; for cord sections, two or three hours are usually sufficient; in brain sections, twenty-four hours are required in order to color the very fine fibres of the cortex.

After staining, the sections, now black in color, are differentiated by immersion in the following solution: borax, two parts; ferricyanide of potassium (red prussiate), two and one-half parts; water, one hundred parts. It will be found that the time required for perfect differentiation varies in different specimens; in cord sections, it usually takes one-half hour to several hours before the desired contrast between white and gray matter is obtained, and in brain sections it is longer. No fear of spoiling the sections need be felt. I have frequently allowed sections to remain in this solution for twelve hours without ill result.

From this solution the sections are transferred to water and well washed; then to 80 per cent. or 90 per cent. alcohol; they are then spread on slides and dehydrated thoroughly with absolute alcohol, and then clarified. I prefer xylol or creasote for clarifying, and xylol or benzole balsam for mounting.

If the steps in this method are carefully followed, success is certain; and it is without exception the method for tracing nerve fibres or demonstrating nerve lesions.—*Medical News*, Nov. 6, 1886.

LYCOPUS VIRGINICUS IN THE TREATMENT OF VENOMOUS BITES AND STINGS.—DR. J. R. BRIGGS, of Ft. Worth, Texas (*Trans. of the Texas State Med. Assoc.*, 1886), calls attention to the efficiency of *Lycopus virginicus*, commonly called bugle-weed (the charmweed of the Indians), in the treatment of the effects of the bites and stings of venomous reptiles and insects. "Any one," he says, "who has attended the fairs and other gatherings held throughout Georgia, Tennessee, and Kentucky during the egress of the Indians from that country doubtless remembers that on such occasions there were many Indians who would, with impunity, allow the poisonous rattlesnake to bite them. It was observed that, in order to counteract the effects of this poisonous reptile, they masticated large quantities of the bugle-weed and swallowed the juice. That the bugle-weed was the identical weed used at the time, I have absolute proof." He then gives a brief account of the case of a man who was suffering severely from the effects of the sting of a large centipede. Ordinary stimulants, such as whisky and ammonia, having produced no perceptible results, Dr. Briggs gave a decoction of bugle-weed (made with an ounce of the plant to a pint of water, a small quantity of alcohol being added to preserve it) in tablespoonful doses every hour, and applied it on linen cloths to the trail of the insect on the patient's abdomen, extending from the crest of the ilium to the umbilicus, an inch wide, of an erysipelatous redness at first, afterward black, roughened, and elevated. The man became comfortable in four hours, and was able to attend to his business at the end of three days.—*N. Y. Medical Journal*, Dec. 4, 1886.

EGGS IN THE DIETARY IN BRIGHT'S DISEASE.—In order to solve the problem of alimentation in the subjects of Bright's disease, LÖWENMEYER placed a number of patients upon a regimen which was as regular as possible, and added to the diet-list from six to nine eggs a day. In four of the patients, of whom three suffered from amyloid kidney and one from nephritis consecutive to cardiac disease, the addition of eggs to the dietary was followed by no increase in the excretion of albumen in the urine. In three others there was a notable increase; but the experimenter excluded two of them, one because the patient was not carefully watched, and the other because menstruation occurred just after the beginning of the experiment. In the third case, one of interstitial nephritis, the author remarks that the increase in albumen might be accounted for by the fact that the patient took the eggs raw, while the others ate them cooked. He concludes, as a result of these experiments, that an alimentation even very rich in albumenoid matters causes no increase in the amount of albumen in the urine.—*Lyon Médical*, No. 36, 1886.—*Medical Record*, Dec. 11, 1886.

RHUBARB IN THE TREATMENT OF THREAD-WORMS. DR. SIDNEY MARTIN, (*Practitioner*, October, 1886), thinks that in many cases, although the irritation about the anus may have been relieved by injections, the persistent irregularity of the bowels and disturbance of sleep are owing to the fact that worms still remain in a higher part of the intestine. In such cases he has found that small doses of rhubarb are efficient in bringing the worms away and in regulating the bowels, so that in most instances injections may be dispensed with. He has found the following formula most useful, varied slightly according to the age of the child:

Tincture of rhubarb	3 minims;
Magnesium carbonate	3 grains;
Tincture of ginger	1 minim;
Water	to 1 drachm.

This amount is to be taken two or three times a day, according to the effect on the bowels. Whether the rhubarb acts as a vermicide or simply by "moving the worms on," he is unable to say.—*N. Y. Med. Jour.*, Oct. 30, 1886.

COCAINE IN MERCURIAL STOMATITIS.—BOCKHART has found that painting the gums with a 5 to 10 per cent. solution of cocaine a few minutes before eating will enable the patient to eat without trouble or pain. —*Revue des Sciences Méd.*, July, 1886.

CHRYSAROBIN IN INFANTILE ECZEMA.—STAQUART reports that in doses of 5 millig. to 2 centig. in young children, and 4 centig in children 7 years old, chrysarobin causes rapid dessication of the inflammatory redness.—*Revue des Sc. Médicales*, T. 38, No. 1.

THE
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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JANUARY 8, 1887.

THE SURGERY OF THE PANCREAS.

The most important surgical paper of last year, in this country at least, was read by DR. NICHOLAS SENN, of Milwaukee, before the American Surgical Association at its last annual meeting, and has now been issued as a reprint from the *Transactions* of the Association. Those who are familiar with former papers of Dr. Senn, with the records of his careful experiments, and with his lucid style, need not be told more as to the importance of the paper. But whether our readers be or be not familiar with his writings, they will at once recognize that a carefully written paper of 129 octavo pages on the surgery of the pancreas must contain much valuable material, and positive additions to our knowledge of this very obscure subject. The surgery of the pancreas has no history except as to the treatment of a few cases of cysts of the gland, but the results in these cases have been so encouraging that there is much hope for the future of the surgery of the organ.

The experiments of Dr. Senn as to complete section of the pancreas tend to show that this lesion, unless complicated by other and more serious lesions, is not dangerous to life if the chief source of danger, hæmorrhage, be properly treated. "The coaptation of the divided ends would be desirable, but is not essential, as the continuity of the duct is not restored after this injury." No disturbance of digestion was noted in either of the two experimental cases, since a sufficient amount of pancreatic juice was secreted from that portion of the organ in communication with the intestine. In case of this injury the most important indication is to arrest bleeding, and to suture the two cut ends of organ so as to keep them in place, and thus maintain normal blood-supply. In an experiment with regard to the effect of laceration of the pancreas death resulted from the accidental re-opening of the abdominal wound. "Hæmorrhage was arrested spontaneously, and the process of repair, so far as the wound in the pancreas was concerned, appeared to be satisfactory. The divided ends were displaced considerably immediately after the laceration, but were subsequently brought into close contact by the cicatricial contraction." Believing that putrefaction cannot occur without specific germs, Dr. Senn crushed the pancreas of a cat to the extent of two inches in order to test the matter. The animal lived until it was killed, on the eighty-sixth day. It was found that the crushed portion was removed by absorption, which seems to be very rapid in this locality, and which may be explained by assuming that the peritoneum takes an active part in the process. No infection took place, nor could any evidence of putrefaction be found. "Subsequent degeneration, atrophy and sclerosis, take place in that portion of the gland which is no longer connected with the intestine by a permeable duct."

It was found that complete extirpation of the pancreas is invariably fatal, though Schiff has asserted the contrary; and it is important to know that in the two specimens from experiments which showed evidence of gangrene, this was seen on the convex surface of the bowel, but did not in either case involve the entire diameter of the intestine. Surgically speaking, partial extirpation of the pancreas is less serious than complete removal, though physiologically the consequences may be the same if the portion removed embrace the common duct or the two principal ducts from the two portions of the gland. In all of Dr. Senn's experiments the common duct was removed with the excised portion, and thus left the animal, physiologically, without a pancreas. In two cases the animals lived long enough to show the influence of the pancreatic juice upon digestion and assimilation. In each of these animals "the general health and nutrition remained unimpaired for four weeks, when emaciation, with fatty stools, followed, which resulted in death from marasmus in, after seventy days, and reduced the second to a skeleton in 126 days." As from the beginning no pancreatic juice passed into the intestine it is difficult to account for the good condition of the animals for the first four weeks. Had the marasmus been due to the resection of the mesentery of the duodenum, by diminution of intestinal absorption, it should have begun earlier. We may assume that the pancreatic tissue left continued to secrete until it was incapacitated by

degenerative changes; and with this assumption we must believe that the pancreas could absorb its secretion, and that this, entering the circulation, must have had some influence upon digestion. It is also important to know that in one case almost the whole duodenum was suddenly deprived of its blood-supply, and yet gangrene did not occur, as collateral circulation was set up by the development of two vessels in a band of cicatricial tissue along the concave surface of the bowel.

Seventeen experiments were made to prove the feasibility of ligation of either portion of the pancreas near the common duct as a surgical measure, and the regularity with which the pancreatic tissue is removed by degeneration and absorption of the detached portion of the gland. The ligatures used were of rubber. In every case in which complete physiological detachment was produced by the ligatures, resection, crushing, or any other means, atrophy followed. In no case was anything like a cyst produced. The facts of this atrophy and the non-formation of cysts shows that "in operations upon the pancreas it is not essential or necessary to remove peripheral portions of the gland, for fear that if any of the parenchymatous structure should remain a retention cyst would follow. In partial resection for injury or disease it would be advisable to ligate the peripheral portion, and permit it to remain, as it would lessen the danger by the infliction of less traumatism, and we can confidently expect that it will be removed in a short time by absorption." So also the important pathological question of retention cysts is settled by the experiments; such cysts cannot be due to obstruction of the duct. Again, we are taught the importance of removing those portions of the organ which are not supplied with blood-vessels rather than to trust to absorption, as dead pancreatic tissue is very putrescible.

Experiments were made for the purpose of studying detached portions of the pancreas, and the method of operating in these cases is worthy of the attention of physiologists, though it need not be detailed here. The experiments showed conclusively that when a portion of the pancreas is separated secretion continues until complete degeneration and absorption have caused the disappearance of the parenchyma. "That the atrophy in the part of the organ which has been detached from its connections with the intestine is not due to a traumatic interstitial pancreatitis is proved by the normal appearance and structure of the remaining portion of the gland which has retained its anatomical and physiological relations to the intestine:" which again supports the author's view that physiological detachment of any portion of the pancreas is invariably followed by degeneration and complete atrophy, consequently also by complete cessation of functional activity. Eleven experiments were made for the purpose of determining the action of the pancreatic juice on the peritoneum. In only two of the cases was death caused by purulent peritonitis, and the results justify the conclusion that normal pancreatic juice does not cause peritonitis when brought into contact with the peritoneum; and the further conclusion that such juice is absorbed. The duodenum in these cases was denuded of its mesentery, and thus of its vascular supply, for from one to three inches, but no gangrene occurred. One experiment showed that even if no pancreatic juice be produced, digestion may remain good; and the ligation experiments show that the introduction of normal pancreatic juice into the circulation is not harmful, and may be tolerated for two or three weeks without bad consequences.

It has already been seen that crushing and laceration of the pancreas are not of themselves necessarily fatal; and if, during an exploration for abdominal injuries, this organ be found extensively crushed, "it would be good surgery to remove the crushed portion after preliminary ligation of the organ on each side of the comminuted portion. Ligation of the pancreas can be safely none with a single catgut or silk ligature, as the friable texture of the organ will permit of burying the ligature deeply." Crushed pancreatic tissue and pancreatic juice must be removed to prevent traumatic infection. In a case of prolapse of the pancreas, if the prolapse be recent and there are no signs of inflammatory or other changes, it should be thoroughly disinfected and replaced with great gentleness; and if reduction be difficult the wound should be enlarged. Should the organ be in an inflammatory or gangrenous condition "the parts should be thoroughly disinfected and the organ pulled further into the wound until healthy tissue is reached, when a ligature is applied and the diseased portion removed with the knife or scissors. After thorough disinfection the stump is dropped into the abdominal cavity and the external wound closed. Thorough primary removal of infected tissue is the only safety against subsequent extension of the infection to the peritoneal cavity, and the only guarantee for primary union of the abdominal wound." Gangrene, one of the terminations of acute inflammation of the pancreas, may also be included among the diseases of the pancreas which may be treated by surgical measures; inasmuch as spontaneous recovery has followed

the elimination of the necrosed organ, it seems not unlikely that timely removal of the necrosed pancreas would add to the chances of recovery. It should not be forgotten that the pancreas may be a part of the intussusception in a case of invagination, and in abdominal section for the relief of this condition the pancreas should not be overlooked. In searching for the cause of this condition, or that of peritonitis, when it is found that the primary disease is located in or around the pancreas radical measures should be adopted when practicable. "Whenever the sac can be stitched to the external incision this should be done, and the sac opened, disinfected, and drained. Search should be made for the necrosed pancreas, and when found detached it should be removed. As in most of these cases the retroperitoneal tissue is extensively infiltrated, a counter-opening should be made in the lumbar region above the kidney, and thorough drainage established. If an anterior abdominal fistula cannot be established, the course to be pursued should be the same as in treating a pancreatic abscess under similar conditions."

In a subsequent issue we will notice that portion of this valuable paper which deals with other pathological conditions of the pancreas.

SOUR GRAPES.

The editor of the *Boston Medical and Surgical Journal*, in the number for December 30, 1886, devotes six pages to an enumeration of the more important events of a medical character during the year, in which is included one rather facetious paragraph concerning the International Medical Congress to be held in 1887. With characteristic unfairness he says: "For this reason, as well as in accordance with the territorial policy of the management, the *cities* of the *Atlantic coast* will have but a small representation in the *honors* of the Congress." Had our learned confrère taken the trouble to examine the list of general and executive American officers of the Congress, including the Vice-Presidents, and also the Presidents of the Sections, he would have found them to number thirty-three, twenty-one of whom are residents of the Atlantic States, and *seventeen* of the twenty-one are residents of the five Atlantic cities, Boston, New York, Philadelphia, Baltimore, and Washington; while only twelve of the thirty-three chief American officers are distributed to the great cities and universities of the vast country west of the Atlantic States. It is certainly amusing to see with what gravity our Boston annotator of medical events repeats the statement, originating with some mischievous wag, "that Dr. Pancoast, of Philadelphia, had personally invited the Queen of England to be present." Credulity and self-complacency are often coincident traits of the same mind.

INTERNATIONAL MEDICAL CONGRESS—VACANCIES FILLED.—J. J. CHISOLM, M.D., of Baltimore, Md., has been appointed President of the Section of Ophthalmology of the Ninth International Medical Congress, in the place of Dr. E. Williams, who was compelled to resign on account of ill-health. JUDSON B. ANDREWS, M.D., Superintendent of the Hospital for the Insane, Buffalo, N. Y., has been appointed to the office of President of the Section of Psychological Medicine and Nervous Diseases, made vacant by the recent death of Dr. John P. Gray. These are excellent appointments, both parties being widely known and eminently well qualified for the respective positions assigned to them. No vacancies now remain in the list of chief officers of the Preliminary Organization of the Congress or of its Sections; and our information from all departments is of the most encouraging character.

PROFESSOR J. S. JEWELL, EDITOR OF THE NEUROLOGICAL REVIEW.—We much regret to learn that this eminent and most indefatigable worker continues to suffer so much from ill health, that he is constrained to give notice of an indefinite suspension of the publication of the *Review*. With a mental activity and erudition seldom equaled, he is compelled to yield to physical infirmities that would have long since overwhelmed any man of less tireless energy and steadfastness of purpose. We hope more rest, and perhaps a milder climate, may yet restore his physical health and endurance.

AS OTHERS SEE US.—What is wanted in America, says the *Lancet*, is the establishment of some general principles of action rather than the intermittent and varying action of a number of separate States; and we entirely sympathize with the request which has gone forth from more than one State, that the general health defences of the country should be subject to some central organization.

ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL IN THE STATE OF NEW YORK.—The third meeting of this Association will be held at the New York Academy of Medicine, January 19, 1887. Important communications are announced from six or eight members.

SOCIETY PROCEEDINGS.

CHICAGO GYNÆCOLOGICAL SOCIETY.

Regular Meeting, Friday, November 19, 1886.

THE PRESIDENT, CHARLES WARRINGTON EARLE, M.D., IN THE CHAIR.

(*Concluded from page 25.*)

DR. W. W. JAGGARD read a paper entitled

A CASE OF CHRONIC INVERSION OF THE UTERUS, OF TWENTY-ONE MONTHS' STANDING, REDUCED BY COLPEURYSIS.

DR. PHILIP ADOLPHUS: The author of this excellent paper has adopted in the reposition of the uterus of his patient, as efficient a mode of procedure as any hitherto in use. It is also the safest mode of replacing the organ. In the treatment of chronic inversions, success has followed all methods of replacement, whether effected gradually or rapidly. But forcible taxis ought to be the last resource, when gentler and as sufficient means are exhausted. It may lead to laceration of the vagina, peritonitis and death. Gradual pressure, sustained or interrupted, solid or elastic, to which taxis has been added, has been equally successful, and has been practiced since 1858. It is absolutely safe. In some cases air pessaries or other elastic contrivances have been left in the vagina constantly, or have been replaced at intervals, for a period of three to eighteen days, and *uteri* have been returned by this method, which were inverted from one to fifteen years. The essential to success in the return of an inverted uterus is patient, gently continued manipulation of *some portion of the uterus*, by the fingers in the vagina with the application of the other hand externally to overcome the constriction of the cervix, and to prevent the forcible elongation of the vagina. A small hand, which observes the course of the pelvic axis, and avoids the promontory of the sacrum, and goes on one side of it, is also an element of success. Old adhesions opposing reduction of the inverted uterus are rarely present. An inflammation of the serous tissue in some portion of the pelvis may, however, be present as a complication, for this is an extremely common affection in all kinds of pelvic disease. Doubtless, in cases in which peritonitis followed manipulations, a chronic or subacute inflammation of the serous tissues was the predisposing cause. However, the most interesting portion of this subject to me is that of diagnosis, *in all tumors lying in the vagina*, which do not pathologically implicate that organ and the vulva.

A correct diagnosis in inversion of the uterus is absolutely essential to treatment, and the safety of the patient. The question of differential diagnosis between inversion of the uterus, and polypi and fibroids, is almost daily presented to the gynæcologist for solution. Not much reliance can be placed on the history in *chronic* inversion, for the diseases present similar symptoms. The size of an inverted uterus of some standing is scarcely larger, and is often smaller than in the natural state. It is desirable to look on the case under examination as one of inversion as long as any doubt exists. The bowels and the bladder should be emptied and the patient examined under ether. It is certainly *not* a case of inversion, when by bimanual *palpation*, with fingers in vagina, fingers or hand into the rectum, or sound in the the bladder, the *unimpaired roundness* of the uterus presents itself for palpation, either in the normal or retroverted position. In the just mentioned condition, if the sound enters the uterus two and one-half inches or more, the uterus merely contains a fibroid or polypus which emerges from the cervix. The diagnosis may be rendered more difficult if no opening in the *cervix uteri* can be found, the cavity having been agglutinated by previous inflammation, to the polypus. Here downward traction of the vaginal tumor to the vulva, by a vulsellum as recommended by Susdorff, and I copy his words, will at once confirm the presence of a polypus. "For the relations of the parts to each other as they existed in the vagina will be greatly changed when exposed to view. The lips of the cervix which surrounded the pedicle will have disappeared, having also become inverted, and along with it, probably, the vagina at its junction with the neck." The insinuation of the sound into the uterus will at once confirm the information procured by bimanual palpation. If the same manner of examination disclose the body of the uterus indented or cupped, we have a partial inversion, either with or without a fibroid, a condition which is not as unfrequent as is generally supposed. The presence of a tumor in the vagina, the absence of the *fundus uteri* in the abdomen, and the presence in its place of a well defined ring or cup-shaped cavity, unmistakingly announces an inversion of the uterus; traction confirms the diagnosis. An incision, not a puncture, along the sides of the tumor, after the patient emerges from the ether, will at once show whether we have to deal with the fundus of the organ or a polypus. In the one case it will induce pain, in the other it will prove painless. In the former it will relieve the congestion and possibly lead at once to its reposition, or prepare for its successful replacement in the future.

DR. H. P. MERRIMAN: I would like to ask whether, after the uterus had been partially restored so that the fundus was on a level with the lips, and the colpeurynter seemed to do no good for eight days following, taxis would not probably have promptly, almost immediately, accomplished the remaining portion of the work?

DR. H. T. BYFORD: Every method has danger, and there is one danger in this method which should be mentioned; that is the danger of sepsis or resorption of decomposing secretions. That there was danger even in this admirably managed case was evidenced by the rise in temperature, followed by the disappearance or decline in temperature on cleansing the bag and vagina. I have seen the immediate decline of fever by washing out the uterus when enlarged and filled with decomposing matter. I object to the introduction of the hand into the rectum to diagnose a case of inversion, as suggested by Dr.

Adolphus. I consider it a dangerous practice because it does a violence to the part which sometimes has done an irreparable injury, and is unnecessary.

DR. W. H. BYFORD: With reference to the subject of inversion and more particularly the diagnosis, there are two points which I think are very important in addition to those mentioned by Dr. Jaggard. In cases of polypus attached to the neck of the uterus and filling up a good part of the vagina, the uterus is always enlarged and may be palpated above the pubes. Another point in the diagnosis is the difference in the sensation imparted to the examining finger. A polypus feels as if covered by a shining smooth membrane, unless it is decomposed, while the surface of the uterus gives the sensation of pushing the finger into plush or velvet. I give these two points of diagnosis as the results of my own observation and as being usually present.

With reference to the mode of reducing inversion, I will give some of my own experiences during the last thirty years. In the year of 1859–60, I had a patient sent to me from Lafayette, Ind., with a chronic inversion of the uterus, which I attempted to reduce. I had just read a long treatise on the subject by Dr. White, of Buffalo, and Drs. Thomas and Emmet were then beginning to talk and write about these things, and I went at it with considerable enthusiasm. I got up the cup that Dr. Jaggard mentioned, and I also got a large rectal bougie, an instrument which Dr. White had praised very highly in his first operations, and I made the first attempt lasting about an hour an three-quarters, and when I got through I was worse off than the patient, although she was pretty badly used up. I waited two or three weeks and made another attempt, but after a protracted effort I found my finger passing through the *fundus uteri*. I had been as cautious about the force as I could be, making the effort as gradually as possible but I perforated the fundus. I fully expected that the damage done would be fatal to the patient, but it did not produce any bad effects whatever and she entirely recovered in two weeks and went home. Two years later she came to see me again, but did not wish to have another effort made to have the uterus reduced. Two years later the uterus was found in its normal position. I saw the patient and her physician, and I am certain that nothing had been done to reduce it. I tried two other cases, and made the same efforts but without success. I then concluded that it was hardly worth while to make trials of that nature again, and in the next case I tried the colpeurysis treatment. For some days I was nonplussed, from want of experience, as to the mode of placing the instrument in the vagina. I used the quadrilateral colpeurynter, and after I placed it in the vagina, I found the next day that I had gotten it under the uterus lengthwise, that the fundus was directed toward the vulva, and the neck directly backwards. I was merely compressing the body of the uterus against the *symphysis pubis*. I reflected considerably before I could get the right idea as to the manner of placing the instrument in the vagina. Finally I pushed back the fundus until the axis of the uterus corresponded to the axis of the superior strait, and then introduced the colpeurynter as has been described by Dr. Jaggard, and applied the force. The next day when I came back I found there had been some impression produced, and I went on with the use of it, taking it out every day and replacing it in this manner, until in seven and a half days the inversion was reduced. The patient was a poor woman and it was necessary for her to take care of her child. She did so, attended to it in every way and also cooked three meals a day for her husband. She was on her feet nearly the whole day time, and yet the instrument acted as well as if she had been lying in bed.

Three out of the five cases I have operated on have been as painless as this. I should judge that a young primipara would probably suffer more from the use of the colpeurynter than one who had had children. I have now reduced five cases of inversion by the colpeurynter and have not failed in any case since I commenced using the instrument. The first case of inversion I had, I amputated the uterus. In considering the matter since, I doubt if any other treatment could have been adopted which would have been effectual. The uterus and vagina were inverted, the vaginal canal was entirely outside of the body and the uterus hung down from it, both making a tumor nine inches long. The uterus was very much enlarged in consequence of its being dependent for so long a time. I was in consultation with two German physicians of this city, and they suggested as the patient was living a miserable life and would die before long, we should cut it off. After half an hour's use of the écraseur, it was removed. We amputated a little below the centre of the cervix. There was no bleeding, nothing to give rise to uneasiness. We pushed the vagina back again, put the parts in place and the patient recovered in the course of a month. Having spoken of one spontaneous cure, I will tell you of a patient that I attended in Mercy Hospital in 1864–5, whose uterus was much in the same way as the one that I first operated on, coming out entirely beyond the vulva and dragging down the vagina very low, so that there was simply a circular sulcus between the labia and the vaginal wall. I tried to restore it by manipulation and failed; I proposed to amputate it but the patient would not consent. Meantime one of the internes had fallen in love with her and they went off to Missouri and got married. About six years afterwards, the doctor came back and told me that he had a son and his name was Byford. Upon inquiry I found that the child had been borne by this woman. One case of inversion occurred in my own practice. I attended the patient during confinement, and as far as I know she had no difficulties whatever for seven or eight days. By that time I was on my road to California, and I think Dr. Roler looked after her for some little time after I was gone. In two months I returned home and was informed that she had inversion of the uterus, which I did not believe. I went to see her and found that she was suffering from complete inversion. That was one of the cases I cured by colpeurysis. When the inversion occurred I do not not know. I am certain that I made two or three

examinations as I always did at that time, always one the second day after confinement. I did not notice anything of the kind, and yet it might have been commenced and finished afterwards. I saw a case with Dr. Henry Byford, which had been attended by a midwife, in which the inversion occurred so that the fundus could be touched through the mouth of the uterus, and it remained in that way two or three weeks. The patient was bleeding, but I believed the contraction of the mouth of the uterus was sufficient to prevent it coming through, I advised ergot, and in a few days the uterus was in its proper position.

DR EDWARD WARREN SAWYER: One point is the persistence that one can observe in applying the colpeurysis, without a fatal result following. The interesting case that Dr. Byford has spoken of last, also shows the possibility of the obstetrician, seeing nothing in the first few days of the puerperal state to suggest that anything has gone wrong. Cases are recorded in which the inversion has taken place without the obstetrician knowing it. In the fatal case that occurred in my practice the symptoms were so profound that it was impossible to overlook it, and I think the diagnosis of recent puerperal inversion of the uterus is much easier than of chronic inversion.

In the case which occurred in my practice, the rim of the crater marking the upper border of the uterus, which I palpated through the abdomen, was fully as large as a common bowl, and its edges were very sharply defined. In addition to that the fundus could be distinctly felt through the os uteri. One feature of the paper, which is by no means the least to be commended, is the very admirable and graphic way in which the case was presented.

DR. H. P. NEWMAN: My experience has been limited, but I remember a single case, in which I assisted a surgeon of this city in attempting the reduction of a chronic inversion of the uterus. It was in a hospital, where they had every facility for the operation and it could be proceeded with leisurely. Some two hours were taken up with the various devices for reducing the inverted fundus, all of which were of no avail. There was a complete inversion of the uterus but not of the vagina, and I think previous to the attempt at reduction a fibroid was removed from the fundus of the uterus. No further myomatous condition was discovered at the time, but the difficulty was exceedingly great in this case and nothing whatever was accomplished. I have no knowledge of the subsequent condition of the patient, whether she suffered materially from this, or whether she was afterwards successfully operated on, or the uterus amputated.

THE PRESIDENT asked Dr. Jaggard what means he used to disinfect the colpeurynter.

DR. JAGGARD replied that he washed it thoroughly with soap and warm water, afterwards disinfecting it with a 5 per cent. solution of carbolic acid. The vagina was irrigated with a 2 per cent. solution of carbolic acid, and a bacillus of iodoform introduced.

DR. ADOLPHUS, in reply to Dr. Henry T. Byford said: In complicated cases of tumor in the abdomen or pelvis I would not do without the introduction of the hand into the rectum. I am not alluding to Simon's method, putting the hand in as far as the elbow, but I am talking of the hand. And when the patient is under ether, it can be done easily. It depends upon the size of the hand, perhaps, but with a hand well greased and introduced slowly it does a great deal of good, and gives an immense deal of information which we cannot get in any other way. I examine every case, without conception, *per rectum*, with the finger.

THE PRESIDENT asked Dr. W. H. Byford if he regarded it good practice after all ordinary means had been exhausted and the uterus was still inverted, to amputate?

DR. W. H. BYFORD: When all other measures have failed to effect the object and the patient is suffering so much as to make relief imperative, yes.

THE PRESIDENT: I saw Prof. Chiara, in Florence, operate upon a case of that sort. He placed a silver wire around the uterus and left it in position and the parts gradually sloughed away.

DR. W. H. BYFORD thought that mode of operating upon the uterus bad, that it would have been better to have used the wire ecraseur to stop circulation, and cut it off. But a sloughing mass in contact with the parts would be likely to produce pyæmia.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, November 10, 1886.

THE PRESIDENT, C. H. A. KLEINSCHMIDT, M.D., IN THE CHAIR.

H. M. CUTTS, M.D., Secretary.

DR. D. S. LAMB presented the history of a case and specimens of

SYPHILITIC DISEASE OF BONE.

Annie W., age 41, mulatto, died August 25, 1882. Necroscopy by Dr. D. S. Lamb. Body much emaciated; thick scabs along tibial crests, one foot long and one or more inches wide; bed-sore on each trochanter major and on sacrum. Umbilicus dilated into small pouch, containing an adherent portion of greater omentum. Heart normal, except some fatty degeneration of anterior segment of mitral valve. Small patch of fatty degeneration on ascending aorta. Old pleuritic adhesions at base of right lung and between lobes; œdema and hypostasis of lower lobe and some tubercles. Firm old adhesions of left lung and between lobes; lung anæmic contained tubercles; tubercular cavity and evidences of bronchitis in upper lobe. Bronchial glands pigmented. Thin blood clot in lower part of œsophagus. Omentum adherent to left side of abdomen and to bottom of hernial sac. Stomach displaced downwards; contained large quantity of blood, clots, etc.; clotted blood in small and large intestines, which, with the stomach, were normal. Liver anæmic; firm adhesions to diaphragm and hepatic flexure of colon; weight, 120 ozs.; left lobe disproportionately en-

larged; edges rounded; iodine test showed amyloid degeneration. Gall-bladder contained some green bile. Spleen 26.5 ozs., amyloid. Kidneys large; left weighed 8 ozs., amyloid. Uterus showed patches of inflammatory exudation on peritoneum. Right ovary converted into cyst size of walnut in which were colloid masses size of small shot; left ovary enlarged, contained several cysts and colloid deposits. Bones as far as examined showed results of inflammation, probably syphilitic. Sternum; surface irregular; depressions; periostosis and osteoporosis. Costal cartilages porous. Clavicle much atrophied throughout; surface irregular at sternal end. Knee-joints contained fluid and showed erosions of cartilage and existence of the bones. Lower ends of femora, patellæ, tibiæ and fibulæ showed surfaces irregular, depressions marked; new growths of bone; general osteoporosis. Bones of feet, especially of tarsi, somewhat eroded; fine periosteotic growths; some osteoporosis, especially of calcanea.

Microscopical examination by Dr. J. C. McDonnell showed that liver and spleen were amyloid; kidney, amyloid and cirrhotic; and the colloid degeneration of ovary involved the stroma.

Dr. Samuel S. Adams read the history of a case of

HÆMATEMESIS.

(See page 35).

Dr. A. F. A. King said that Dr. Adams stated that he had to do with a simple gastric ulcer. This might be doubted, as there were apparently no symptoms of its presence now, and, further, some of the usual symptoms were absent before the hemorrhage. There had been no pain after eating for one thing. He did not mean to dispute Dr. Busey's claim to priority in the use of iron in hæmatemesis, but several years ago he had reported a case of this affection in which everything had been used without avail. Finally, twenty drops of the liquor ferri subsulphatis in water were given. There was immediate vomiting of clotted blood, but no more hemorrhage. The hemorrhage in this case was from alcoholic gastritis. There was good recovery, but the patient died from the same cause some years later.

Dr. G. L. Magruder said that fifteen years ago he had a patient suffering from a violent malarial fever. One morning he began vomiting bile, and about noon vomited a large quantity of blood. He had used a mixture of acetate of lead, acetic acid and morphia and there had been no return of the hemorrhage. The patient was much prostrated for several days afterwards. Last winter he had had a second case and the same remedy stopped the hemorrhage in two days. The acetate of lead is a sedative and a mineral astringent, which class he thinks better than the vegetable astringents. This was so in Dr. Adams' case. Gallic acid and ergot, he thought, were nauseating and hence not useful in the premises. Tannic acid would work better, where drugs could be applied directly to bleeding vessels. Gallic acid acts after absorption, but is less of a styptic than tannic acid when applied directly.

Dr. I. Bermann thought that gallic acid was a very valuable styptic when applied directly. He recollects a case of an old gentleman who had had twelve teeth drawn. Hemorrhage being persistent for six hours, a doctor was sent for and Monsel's solution was applied on cotton, but without success. About 2 A.M. he was called in and succeeded in stopping hemorrhage with ice. He went home, but was called again in a few hours. This time he took along with him a powder of two parts of tannic acid to one part gallic acid, a mixture highly recommended by Morrell McKenzie. The exhibition of the powder stopped the hemorrhage and there was no return. This was in favor of vegetable astringents.

Dr. Magruder said that, nevertheless, tannic acid precipitated albumin much more readily than gallic acid. Besides, two parts of the powder used by Dr. Bermann were tannic acid.

Dr. S. C. Busey said that he did not claim the priority of the use of tinct. ferri chloride in hæmatemesis, but he had never seen it recommended in such large doses as he gives it. His first case was a lady with cirrhotic liver. She had been having hemorrhages from the stomach and he had given her all sorts of things. He arrived one day just as she went into collapse from a severe hemorrhage. He stepped to the mantel and poured out a teaspoonful of the tincture of the chloride of iron from a bottle-full which was there. The patient had just vomited. He gave the iron in a half glass of water and there was no recurrence of the hemorrhage. About a year later he did the same thing with a like success. His method of giving the iron was on an empty stomach—*i. e.*, just after vomiting, and in about one-half glass of water, in order that it may be well diffused over the stomach. Dose, one drachm. He has had several other cases with equally good results. The authorities do not approve of the use of iron. In his cases he had obtained the best possible results and should continue to employ the agent. There is doubt in almost all cases as to whether we are dealing with a gastric ulcer or not. There is no pathognomonic symptom of this affection. It is one of the most difficult of diseases to diagnosticate. That it frequently occurs without being suspected is proved by the number of cicatrices, less often ulcers, we find in the stomach at autopsies upon persons who present no history of ulcer. There may be for years only the symptoms of ordinary gastritis, and until hemorrhage occurs ulcer may never have been thought of. Hemorrhage was the most sure sign of the disease. The age and sex were important factors in diagnosis also. It occurs most frequently in the female between the ages of twenty and thirty. Males between thirty and forty are most likely to have it in that sex. It is often associated with nervous disturbance and may present the symptoms of gastralgia. He thought Dr. Adams' case was one of gastric ulcer, as there was no cirrhotic liver, obstruction to portal circulation, miliary aneurisms or traumatism to account for the hemorrhage. The patient, moreover, was of the the right age and sex, and had lived a life liable to

produce ulcer. Pain after eating, he thought, was absent in a majority of cases. Hemorrhage or perforation were the usual causes of death.

DR. C. W. FRANZONI said that three years ago he was called to see a gentleman who had lived much in tropical climates. He had been having copious hemorrhages from the stomach, reported as enough to fill a good-sized basin. While he was present the patient vomited nearly a quart. He exhibited a drachm of gallic acid in one dose and there was no return of hemorrhage. The next day the patient's whole body was covered with an urticarious eruption which he supposed was due to the gallic acid.

DR. BERMANN remarked that he had seen some cases of atrophy of the optic nerve, an affection which frequently follows hæmatemesis. The only treatment for it is large doses of strychnia.

DR. KING said he was not yet convinced that Dr. Adams' case was one of gastric ulcer. Possibly, he thought, the greater frequency of gastric ulcer in woman than in man might be accounted for by the supposition that corsets obstructed the portal circulation. He does not claim priority in the use of iron for himself, for in the case he reported the drug was suggested by Dr. J. T. Young, who was present.

DR. BUSEY said that gastric ulcer occurs largely in women during their active menstrual life and the hemorrhage is often called "menstrual hæmatemisis." It is common in neurotic and chlorotic women, but whether as cause or effect he cannot say. He thought that the neuroses as causative elements were over-estimated. Perforation by ulcer was more common in women than in men, as for some reason the ulcer is oftener situated on the anterior wall of the stomach.

DR. ADAMS said that though he himself was convinced that the hemorrhage was from an ulcer, it did not absolutely prove its presence. He had seen the patient frequently for the past two years and is certain that if she had been sick during that time she would have consulted him. There was no malaria, and aneurium was unthought of. The history reported was just as he found it, and from these symptoms he had drawn his conclusions. There was no biliousness, and the attacks of indigestion might have been serious or of slight account. The hæmostatics used were those recommended by Dr. Welch in "Pepper's System of Medicine." The patient was said to lace tightly, but for this he could not vouch. The amount of blood vomited was as he himself saw it, and not as reported by her friends.

Meeting of December 1, 1886.

THE VICE-PESIDENT, J. B. HAMILTON, M.D., IN THE CHAIR.

DR. W. W. GODDING, Superintendent of the Government Hospital for the Insane, read a paper entitled

THE PROBLEM OF THE INEBRIATE.

(See page 29.)

DR. TONER said that the medical profession would welcome the incorporation of an institution for the care of these persons. The question of the laws and regulations for its government, however, was one that could not be decided hastily. He moved "that a committee of three be appointed to consider the question of the best management of the inebriate, and to suggest legislation to that end."

DR. GODDING remarked that he was in hopes that his paper would draw out discussion on the question of the propriety of sending inebriates to St. Elizabeth's. At the last session of Congress a bill had passed the Senate which permitted the sending of inebriates to St. Elizabeth's. The bill had not yet passed the House. He did not think that inebriates should be confined with the insane. They needed special treatment for their disease, for in his opinion inebriety is a disease. Nor do the insane people like the contact with the inebriate. He hoped that the Medical Society would take some steps looking towards the establishment of a special hospital for the inebriate.

DR. J. E. MORGAN said that he had seen some reports of such special institutions, and they showed failures.

DR. GODDING said that the only State establishment that he knew of was at Binghampton, N. Y. This had been a failure, partly through bad management. The Washingtonian Home in Boston had done good work, and there was also one in New York city. The system had not yet been sufficiently tried. In Canada and England such special hospitals are in existence, and their necessity is fully appreciated.

DR. J. M. TONER said that failures of these institutions were undoubtedly due to the manner of commitment and to the indefiniteness of the time for which the person is incarcerated. The craving for drink may never be cured, but, in his opinion, the public are none the less responsible for patients' care.

DR. R. REYBURN said that in advocating an institution of this kind we should consider how far the community should be saddled with the care and expense of persons who are personally responsible for their deplorable condition. He did not believe that reformation could be accomplished so well in a public asylum as by private communications, and he thought that every citizen was morally obliged to attempt the cure of an inebriate with whom he comes in contact. Institutions for the purpose under discussion had nearly always proved a failure.

DR. S. C. BUSEY said that Dr. Reyburn's arguments were equally effective against hospitals for the insane or any other special disease. If inebriety was a disease—which he himself was not quite prepared to believe—why not have a hospital especially for inebriates? The community could be taxed with equal justice for this as for any other hospital. In fact the municipal authorities, who derive an immense income from the too frequent drinking places, should be compelled to help support the inebriates they produce. Moreover, well-to-do people do not go to free hospitals or asylums. They or their friends can usually pay for their keeping. Drunkenness is the cause of nine-tenths of the crime and poverty of the country. It fills our prisons, insane asylums and

poor-houses, and the community is directly responsible for the care or cure of its victims. Because previous attempts have failed was no reason why we should not try again. He fully agreed with Dr. Godding, that the inebriate and the insane should not be confined together. He knew of no man to-day who could be called an expert on inebriety, and it will take years of experience, and that not in private practice, to make one. A hospital for inebriates would be the development of another specialty, which, like all specialties, would add something to our general medical knowledge.

DR. J. T. HOWARD said that there had been for some years a law incorporating the Washington Inebriate Asylum. An appropriation had been several times asked for from Congress, and interested gentlemen are still at work with this end in view. They are waiting for the passage of the bill mentioned by Dr. Godding. In reply to Dr. Busey, he would state that there are already doctors who make this disease a special study, as for instance Dr. Croth ers, of Walnut Hill Lodge. He even publishes a journal devoted to the subject.

DR. N. S. LINCOLN said that he was heartily in favor of establishing an inebriate asylum, which he thought most important to the whole community. There is scarcely a family in town which is not cursed with, at least, one relative given to excess, and with whom it is utterly useless to reason. Such persons should be confined for a year, or a life-time, and the institution could be easily made self-sustaining. The patients should be compelled to work at their trade or profession, and should remain as long as they are incapable of self-restraint. He fully agrees with Drs. Godding and Busey, that an insane asylum is not the place for drunkards. Nor are the general hospitals suitable, for in these, as a rule, the patient is given a small amount of stimulant daily and he comes out no nearer cured than when he went in. He does not believe liquor necessary in such cases, and he has never known delirium tremens to follow complete and sudden stoppage of stimulant. He has seen cases of relapse, after treatment, from all the best institutions and hospitals, and he only knows of two cases where there had been a permanent cure.

DR. REYBURN hoped that Dr. Lincoln would not make the argument that relapses were so frequent and cures so few, before a Congressional committee. He thought such institutions an attempt to do at public expense what should be done by individual efforts. He thought that Dr. Busey's argument that the municipal authorities, who get an income from drinking places, should support the drunkard, was beginning at the wrong end. It seemed to him better to limit the evil of drinking, and not first make drunkards and then take care of them.

DR. A. F. A. KING requested Dr. Godding to give the Society some of the reasons why it was not advisable to confine the inebriate and insane together. He said that many people did not care to see their friends in an insane asylum. Certainly there was no suitable place in this city to send a drunkard.

DR. GODDING replied that if the pending bill passed Congress it would legalize the sending of the drunk to the insane asylum. In a week or so these people would be sane in the eyes of the court, and on obtaining a habeas corpus the patient could set himself free. These persons were not committed as insane, but as inebriates, and their association, when sober, with the morally insane, was not a good thing for them. Most of them can never be permanently reformed, and certainly there is no chance of this in the thirty to ninety days for which they may be committed. If committed as an insane person, the question arises as to how far such an individual could be compelled to work. In his opinion, if inebriates are to be benefited they should be made to work under the supervision of a medical officer.

He thought that an inebriate asylum could easily be made self-sustaining.

DR. J. T. HOWARD said that the rules of the Washington Inebriate Asylum contemplated maintaining the inebriate one year and at work. He hoped that when a committee was appointed they would support this institution.

On motion of DR. J. M. TONER, it was

Resolved, That a committee of three be appointed to consider the question of the best management of the inebriate, and to suggest legislation to that end.

THE CHAIR appointed Drs. W. W. Godding, N. S. Lincoln and J. M. Toner a committee under the resolution.

Meeting of December 22.

REPORT OF COMMITTEE ON DR. GODDING'S PAPER.

The committee appointed to consider the question of inebriates and what treatment and legislation can better their condition, have had the subject under consideration and beg leave to make the following report:

It is clear that there should be some change in the present manner of dealing with persons afflicted with this infirmity, some treatment more radical and efficient than has been hitherto attempted here, and that to this end there should be legislation recognizing their defective will power, and providing for their care as incapables. We do not claim or imagine that this abnormal condition exists in every person who drinks or even occasionally gets drunk, but we believe it is present, disturbing the emotions and judgment and dominating the will of the confirmed inebriate, and it is his case that we are here considering. Of this victim of a confirmed appetite for intoxicants we affirm that he is a non-producing, wasteful, disturbing factor of the body-politic, his influence is everyway bad, the life he leads worthless to himself and his conduct an open scandal to the neighborhood. We therefore conclude respecting him, that he is a public nuisance to be abated, a survival of the worst, an anachronism in the civilization of the nineteenth century.

In regard to the disposition to be made of him there are three questions to be considered: First, What does society demand? Second, What does the inebriate need? Third. What legislation will meet these requirements?

What society demands in the first instance is pro-

tection; protection against violence at the hands of a maudlin frenzy whose records are in each morning's paper, that day by day is writing tragedy all over the land; protection against that deterioration of moral fibre, a deterioration born of the saloon and the brothel, which with its deadly dry-rot is sapping the old time virtues of the commonwealth; protection against that race deterioration—those inherited neuroses, chorea, epilepsy, idiocy and insanity—of off-spring begotten in a debauch, where by a strange nemesis the innocent are made to suffer for the guilty under a visitation of the "sins of the fathers on the children unto the third and fourth generation."

Society further asks, that those whom nature or affection has allied to the inebriate shall be protected from the misery and wretchedness, the poverty and degradation which come to the drunkard's home. To the old time question "shall I not do what I will with mine own?" society emphatically answers, "No." The social compact, with or without public office, is in the nature of "a public trust" and you may not violate it, besotting your manhood and squandering your property to the beggary of your family and not expect society to interfere. For those hapless children of inebriate sires, weighted with a "heritage of woe" in the only life that is theirs to live—and yet poor as it is, the right to live in the world is still their birthright—will not society see to it that they have all the chance there is, nor permit a drunken father to trample it out? Shall we not take heed that he "offend not one of these little ones?"

Secondly. What the inebriate needs is correction and reformation. Correction first, because until the idle habits of his life are corrected there can be no reformation. With compulsory detention, and labor also compulsory, he will then be favorably situated for reformation to begin. If this is ever to take place in the victim of this morbid craving for intoxicants it will be through a period of enforced abstinence, an abstinence which must be total and life long. So, too, if the reformation is to be lasting, out of the compulsory labor of his sentence must spring habits of industry that he will take back into the world and into his life. Very important in the direction of reformation is hygienic treatment. With tonics, heathful exercise and simple nutriment, the system is to be gradually brought back to something like a normal condition. To be permanently reformed he must be built up from the bottom. The secretory organs will require a long course of alterative treatment—a very much altered man he must become before society will have any use for him, and he be of any use to society. Most especially does the inebriate need moral hygienic treatment and the strength to be gained from moral teaching. This is placed last in order, not because it is less important than the physical, but, as in the evolution of the race moral and religious sentiments are evolved latest, so in the deterioration of inebriety they are the first to suffer and the hardest to restore.

Thirdly. Of the legislation needed to bring about these results. The bill introduced and passed in the Senate at the last Session of Congress provides for the legal guardianship of the inebriate, with authority to commit to an institution for detention and treatment. The defect of the proposed law is that it fails to make labor compulsory. We believe that the power to compel the inebriate to work is essential to the success of his treatment. The idleness of his dissolute life must be rooted out before better resolutions will grow there. The commitment should be by a judge of the supreme court of the D.C. after due hearing, and should be for a term of years, or, perhaps better for an indefinite period. The power to discharge should be in the hands of any judge of the court, and a power to furlough should reside with the board of managers of the institution; this a kind of ticket-of-leave system, the continuance or extension of the furlough to depend upon the conduct of the individual. Voluntary commitments might be allowed, but with the time of detention to be stipulated as not less than one year. Any enforced abstinence short of this will seldom prove of any lasting benefit.

Associated with the necessary legislation for confinement is the provision for the house of detention and its management. This should be an Inebriate Home for actual residents of the District of Columbia, and under the control of the district commissioners. As already indicated, we think it should have the character of a correctional reformatory. The site should be selected and the buildings constructed with especial reference to custody and employment. It should be protected from intrusion and so guarded as to prevent the escape of its inmates. An island would be the best possible site for such an institution, but since we have no suitable island a large farm in the outskirts of the district with ample grounds for out-door work should be selected. The buildings themselves should be plainly built—simple brick structures, with no ostentatious architecture to swell the cost and set the fashion for lavish future expenditure, but carefully planned, conveniently arranged, with light, airy and pleasant workshops suited to varied forms of industry. These buildings should be in groups to afford opportunity for classification of the inmates. Men of means and talent, but victims of an unfortunate appetite, coming voluntarily to this city of refuge to be healed of their infirmity would be neither pleased nor benefited by a daily contact with abandoned sots, who scoff at misfortune and have no wish to reform. Nor should the fallen statesman, even though without means, be required to mess with drunken negroes from the fish landings. Yet the scope and the accommodations of such an institution should be wide enough to gather in and care for all these victims of a common infirmity, and the physician in charge should be a man broad enough and keen enough to recognize and provide for these difficulties as they arise. To this institution should also come, perhaps, for a limited restraint and special provision in a district infirmary department those unfortunate victims of a recurrent appetite, properly designated as dipsomaniacs, who now and then, overtaken by the consuming thirst, breaking over all barriers of self-respect and family ties in their periodic sprees are for a time more violent and dangerous than the ordinary

maniac; and yet when the storm has passed over, casting down everything before it, they go back to their work and are again for a time useful, law-abiding citizens. A law that provides for inebriety should not overlook them. We think that the superintendent should be a medical man, a physician who has made inebriety and its treatment a special study. More than this, he should be equal to his great office, with the support of an ample and able staff; he should be an autocrat in his authority, alive to his responsibilities, with the power which goes with an active brain, an iron nerve, a cheek of brass, ribs of steel and a great heart beating beneath them; never afraid to take the consequences; a man fertile in resources, ready to attempt the impossible of other men and to accomplish it, because he has faith in himself and in his work. With such a man at its head the District Inebriate Home would be a success from the start.

How should it be supported? By voluntary contributions from philanthropic individuals, by the proceeds of sales from the shops and gardens, by receipts from voluntary pay patients, and then whatever it lacks of being self-supporting—and it will probably always lack something, for the individuals who voluntarily come to it for healing will, as a rule, be as completely stripped of means as He was who went down from Jerusalem to Jericho—should be made up "by appropriations from the U. S. and District treasuries in such proportions as Congress may determine." And while our present liquor licensing system remains, your committee would suggest that all liquor licenses be doubled, and that one half, or the whole if necessary, of the revenue derived from this source be set apart for the support of the Inebriates' Home. So at last might their "sowing of the wind" gather its own harvest, and the people see a relation established between the cause and the effect.

Your committee beg leave to present herewith a copy of the Inebriate bill now before the Judiciary committee of the House of Representatives and to say that in their judgment the inebriate should not be confined with the insane as therein proposed. Respectfully submitted,

J. M. Toner,
W. W. Godding,
N. S. Lincoln.

A BILL

To Provide for the Confinement of Inebriates in the Government Hospital for the Insane.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever by petition, under oath, of either parent, brother, sister, son, daughter, or guardian, or commissioner or justice of the peace of the District of Columbia, any person actually resident in the District of Columbia shall be alleged to be an habitual drunkard, incapable of taking care of himself or herself, or his or her property, the supreme court of said District, in special term, shall have the power, in its discretion, on such preliminary examination or inquiry as it may think proper to make *ex parte* to issue an order of notice to such person to appear before said court, or in its discretion, to issue a warrant to the marshal of the United States for the District of Columbia to arrest and bring the person so charged before such court; and it shall be the duty of the said marshal to obey such warrant; and said court shall cause a jury of good and lawful men, to be summoned by the said marshal, to be impaneled forthwith, and shall charge said jury, under oath, to inquire, in the presence of such person, whether he or she is an habitual drunkard, incapable of taking care of himself or herself; and the proceedings in such case shall be like those now authorized by law in cases of persons alleged to be lunatic or insane. When such petition is filed by any person other than a commissioner or justice of the peace, the court shall cause notice of the filing thereof to be given to the attorney of the United States for the District of Columbia, whose duty it shall be to attend such hearing in the public interest; and the rules of law and proceedings applicable to the property of lunatics shall apply to cases of persons declared to be habitual drunkards under the provisions of this section, except when herein otherwise directed; and all persons who may be alleged to be habitual drunkards may dispense with the legal proceedings to establish the same, and may, with the approbation of the court, when said petition may be filed, appoint his or her own guardian, and may voluntarily enter the Government Hospital for the Insane for a limited time; and the superintendent of the said hospital may retain such person the length of time he or she may have agreed therein to remain; and if the person against whom the petition may be filed shall be found by the jury to be an habitual drunkard, incapable of taking care of himself or herself, it shall be the duty of the court to appoint a guardian of such person; and such guardian shall, with the written assent and approbation of the court have the power of confining such person in the said asylum for such length of time as the court may in writing approve; but said guardian, with the written assent and approbation of the court, may at any time release from confinement such habitual drunkard; and the period of confinement of said habitual drunkard may, by the said guardian, with the written assent and approbation of the court, be from time to time extended for such periods as may be necessary for his or her complete reformation. Said court shall have power to discharge such guardian and appoint another in his or her place, and shall have power to discharge the guardianship altogether whenever the court shall, on due inquiry and hearing be of opinion that such guardianship is no longer necessary. The expenses of maintaining such habitual drunkard in said hospital shall be governed by the same provisions now in force in regard to the support and expenses of insane persons therein: *Provided*, That no person shall be admitted to said Hospital for the Insane under the operations of this act who shall appear to the court on such hearing to have come or to have been brought into the District for the purpose of being admitted therein.

FOREIGN CORRESPONDENCE

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

The Better Sanitation of Houses—A Chair from Hunter's Bedstead—Hospital Sunday Fund—The Conjoint Scheme.

Early in the next session of Parliament an introduction of a new bill is promised, to be brought in by Dr. Farquharson "for the Better Sanitation of Dwelling-houses, Schools, Hotels, Hospitals and other Buildings within the United Kingdom." In scope and aim, it would, therefore, seem the bill is of an exhaustive character, so much so, indeed, that aspiring sanitarians will be well content if at first a modicum of the things sought for get parliamentary consent. In principle the bill is simple and far-reaching. Its sub-title is given as the "Sanitary Registration of Buildings Act." It provides in the first instance for the adoption of its provisions in the City of London and in the area under the jurisdiction of the Metropolitan Board of Works. All towns in England of 50,000 inhabitants and upwards are included in the localities in which it is to be applied, while "such other districts in the United Kingdom as may adopt the act" are to have the option of adopting it should its provisions become law. The local authorities charged with administering the Public Health Act would thus become the Sanitary Registration authorities for their respective areas, towns or districts. It is proposed that prior to June 1, 1888, each sanitary authority shall cause the owner, lessee, sub-lessee or occupier of every building, "occupied or intended to be occupied," to deposit with the said authority a certificate for each building in accordance with the terms of the act. This certificate, which is naturally the pivot on which this entire question of sanitation turns, forms the subject of a special clause in the proposed measure. Here difficulties begin, as is evident from the results of an adjourned discussion on the measure which took place a short time since at the Society of Medical Officers of Health. If a certificate of the sanitary safety of buildings is to be granted, and if on the possession of this document people are asked to found an assurance that a building is sanitarily trustworthy, it certainly behoves them to inquire somewhat minutely into the status of the persons who are by the act qualified to inspect and certify under its provisions. The certificate may be granted as the bill now stands by members of the Royal Institute of British Architects and members of the Institution of Civil Engineers who are in practice as architects, surveyors, or civil engineers. Furthermore, that architects or civil engineers who have been in practice five years at the passing of the act, and who register their names accordingly, may also grant certificates. Sanitary associations incorporated by license of the Board of Trade, medical officers of health and medical practitioners qualified in sanitary science are to be entitled to sign those documents. Last on the list come surveyors and engineers of local authorities, so far as their own districts are concerned, and, adds the act "such other persons as the Local Government Board may authorize." Here are clauses and persons enough and to spare. Are they all duly qualified?

At the late meetings of the Society of Medical Officers of Health, it was considered by certain speakers that among the persons named in the section of the act whose terms have just been quoted, there are included many men whose knowledge of sanitation, and of house sanitation particularly, must be somewhat slight. It is not every architect who professes a knowledge of house sanitation, hence it is easy to understand how the provisions of a well-intentioned act may lead to more harm than good. Of what value would, for instance, be the certificate of a local surveyor, who either wilfully or in gross ignorance neglected to provide for trapping off the house from the public sewer. Professor Corfield went so far as to advise his society to petition against the bill in its present form, and to insure that it should be so remodelled as to ensure persons entitled to certify the healthiness of premises, should at least possess some definite qualification or other in sanitary science. Dr. Corfield's objection was expressed by saying that as it stood the new act was one for specialists, and for them alone, the specialists being architects, civil engineers and surveyors. As such, he held the measure should be rejected. Dr. Corfield would have medical officers of health alone entitled to grant certificates, but it was considered by many present that this practice would simply make the bill as narrow in Dr. Corfield's direction as in that of the architects.

An interesting relic of that great surgeon, John Hunter, has just been presented to the Royal College of Surgeons. It consists of a chair formed out of the materials composing the bedstead on which John Hunter slept nightly for many years, and on which his remains were laid previous to removal for burial. The idea of converting the unwieldly frame of an old-fashioned four-poster into a remarkably handsome and imposing looking chair was due to the late Mr. Frank Buckland, to whom the bed had been given as a birthday present by Professor Owen. The chair, up to the present, has only once been used in public, on October, 1879, when Dr. Wadham presided at the annual dinner of St. George's Hospital. Another point of interest in connection with the presentation lies in the fact that it was owing to Mr. Buckland's personal exertions that the remains of John Hunter were removed from the vaults of St. Martin's-in-the-Fields and deposited in the more honored resting place in Westminster Abbey. Mr. Buckland spent days, amidst not very pleasant snrroundings, searching for the coffin containing John Hunter's remains. Mr. Buckland used to be fond of remarking that he felt prouder of being the means of laying John Hunter's remains in Westminster Abbey than of anything he ever did in his life.

It is gratifying to find by the report presented by the managers of the Metropolitan Hospital Sunday Fund that the receipts this year were larger than

they have ever been before, amounting to £40,399 7s. 7d., as against £34,320 8s. 5d. last year, and an average of £30,121 6s. 8d. in the thirteen years preceding. The total expenses entailed in the collection and distribution of this sum amount to rather over £2,000. It is considered that the Saturday and Sunday movements might well be combined, and the expense of two offices—secretary's and clerk's—be thereby saved.

The Councils of the Royal College of Physicians and the Royal College of Surgeons are steadily working to effect the scheme to grant a medical degree to students who pass the examinations of the conjoint board. The feeling prevails that students should not receive an M.D. degree at the time of qualification, or after a qualifying examination, but that some further proof that opportunities for obtaining experience in the practical work of the profession have been utilized should be required. The conjoint boards are shortly to meet again in connection with this matter. G. O. M.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Pathology of Scarlatinal Nephritis— Removal of the Vermiform Appendix.

At the last meeting of the New York County Medical Association Dr. Frank Grauer, of the Carnegie Laboratory, who during the past summer has been making special researches on the subject in Friedländer's laboratory in Berlin, presented a valuable contribution to our knowledge of the *Pathological Anatomy of Scarlatinal Nephritis.* He followed Friedländer's classification in general; dividing the varieties of the affection met with post-mortem into three types, viz.: initial catarrhal nephritis; large, flabby, hæmorrhagic kidney; and acute glomerulo-nephritis; or nephritis post-scarlatinosa.

The initial catarrhal nephritis is the form met with in the first week of scarlatina; generally accompanying the rash, lasting for a few days to a week, and then gradually disappearing. It rarely tends to death, and is liable to be entirely overlooked. It is only recognized by a chemical and microscopical examination of the urine, in which are to be found a slight amount of albumen, mucous and hyaline casts, and, more rarely, red and white blood corpuscles, renal epithelium, and granular casts. The kidneys in this variety he described as slightly enlarged and hyperæmic. The capsule strips off very readily, and on a cut surface there is some thickening of the cortical substance, with more or less loss of striæ. The glomeruli appear as red clots. A microscopical examination, he said, showed swelling and granular degeneration, with desquamation, of the epithelium, especially that lining the convoluted tubules. Hyaline and granular casts were often found in the straight tubes, and, when the process had been more severe, the beginning of a round cell infiltration in the interstitial tissue. It was only in those cases in which children die from the sequelæ or complications such as diphtheria and broncho-pneumonia, that an opportunity was afforded for noticing these changes.

From the description given it might be supposed that the changes are those belonging to a parenchymatous inflammation, but Friedländer has pointed out the following differences: Parenchymatous inflammation, according to Virchow, leads to fatty degeneration of a cell, with disturbance of its function; and this process does not occur in the epithelial cells lining the uriniferous tubules in the form of nephritis under consideration. Then, on the other hand, we have a cellular proliferation in initial catarrhal nephritis; which, as a rule, does not occur in parenchymatous inflammation of the kidney.

The second form of nephritis met with, that characterized by the large, flabby, hæmorrhagic kidney, is not as common as either of the others; Friedländer having found it present in only twelve out of 229 autopsies made by him in cases of scarlatinal nephritis. It generally occurs from the first to the fourth week of the disease, and runs a rapid course; in some cases the urine remaining normal until within twenty-four or forty-eight hours of death. It is generally found in those cases accompanied by extensive angina and diphtheritic inflammation, and the post-mortem appearances are as follows: The kidneys are enlarged, and the cortex is studded with ecchymoses and large hæmorrhagic infiltrations. The cortical substance is thickened and greyish-red in color, there is complete loss of the striæ, and the glomeruli are, as a rule, invisible.

Microscopically, Dr. Grauer said, the tubules were found to contain the various forms of casts, and blood corpuscles, degenerated and desquamated epithelium, and an increase in the connective tissue characterized by a round cell infiltration which was situated mainly around the glomeruli and between the convoluted tubules. In addition, small abscesses were often found in the cortical substance, in which, by means of one of the aniline dyes, micrococci could not infrequently be detected. Whether the latter had any direct relation with the etiology of scarlatina or diphtheria, or whether they were merely one of the forms of micrococci found in acute abscesses, he was unable to state. This form of nephritis is characteristic of scarlatina alone, as it has been found in cases of primary diphtheria, and Friedländer regards it as a septic inflammation of the kidney.

The larger part of the paper was devoted to the third and most important form, acute glomerulo-nephritis, or nephritis post-scarlatinosa. This is the affection which generally occurs in the third or fourth week of scarlet fever, when the patient is convalescing. Having described its main features and the characteristics of the urine in light and in severe cases, he stated that Friedländer found this form of nephritis present in forty-two out of his 229 cases. To Klebs was due the honor of first pointing out that the glomeruli were affected. He noticed, in making fresh sections of the kidney with a double knife, that the glomeruli were anæmic, and after

washing them out with water, that they became dark and cloudy.

Having given a description of the microscopical anatomy of the glomeruli, in regard to which there still exist some differences of opinion among histologists, and of the microscopical appearances noted by Klebs, Klein, Ribbert and Langham in glomerulo-nephritis, Dr. Graner went on to give some account of his own observations based upon nine cases of the disease which he studied in Friedländer's laboratory, and a report of which he embodied in the paper. The results obtained by him are as follows:

Macroscopical Appearances.—The kidneys are enlarged and hyperæmic. There is no loss of cortical striæ, and in some cases the cortex may be somewhat thickened. The glomeruli are pale, prominent, and more or less enlarged.

Microscopical Appearances.—The glomeruli are bloodless, but very rarely a red blood corpuscle may be seen in the lumen of a capillary. When examined with a low power, the glomeruli are found larger than normal, and covered with a mass of nuclei. With an immersion lens the following changes are noticed in the capillaries: In some the only change found is a thickening of the endothelial layer, which becomes more granular. In others the lumen of the vessel is filled with a rich nuclear protoplasm. Dr. Graner thinks that these nuclei are the nuclei of the proliferated endothelial cells, and not those of white blood corpuscles, as contended by Ribbert and other observers. With reference to the glomerulo-epithelium he has noticed swelling and proliferation. It is still considered by some authorities that it is the proliferation of the glomerulo-epithelium that produces a compression of the capillaries, and thereby obstructs the circulation. In all the specimens which he examined, although proliferation of the glomerulo-epithelium was present, the loops, as a rule, were larger than normal; showing that the pressure was from within, and not from without. Proliferation of the capsular epithelium, as described by Klebs, was not observed in eighty-two sections examined by him; but he has observed it in other forms of scarlatinal nephritis. Hypertrophy of the left ventricle of the heart, as first pointed out by Friedländer, is always present in glomerulo-nephritis. In concluding, Dr. Graner, who exhibited under the microscope a number of specimens illustrating points brought out in the paper, expressed the opinion that the term glomerulo-nephritis ought to be restricted to those affections in which there is obliteration of the loops of the capillaries, and not applied to those in which there is only a proliferation and desquamation of the glomerulo and capsular epithelium, as this change has been noticed in all forms of chronic nephritis.

The discussion on the paper was opened by Dr. Flint, who in the course of his remarks said that one of the questions of greatest interest suggested by it was that relating to death from so-called uræmic poisoning. This was a live question, and personally he had very decided convictions in regard to it, which were very considerably at variance with the views which he had formerly held. From the investigations concerning excrementitious substances which he had made during the last few years, he had come to entertain some doubt whether urea was a poison after all. His experiments had convinced him that water is formed *de novo* in the system from a combination of the elements composing it; so that under these circumstances water itself was an excrementitious product, and yet it was certainly not a toxic agent. As to the cause of death in these cases of scarlatinal nephritis, which was commonly attributed to uræmic poisoning, he believed that the parenchymatous changes which were noticed in the patient after death were due very largely to the excessive pyrexia of the scarlatina. The special direction which these parenchymatous degenerations took in different infectious fevers was governed, he thought, by the special cause of the disease; each affection having its own peculiar *contagium vivum*, with its specific mode of action in the system. In scarlatina this showed a strong predisposition toward the kidneys, and in scarlatinal nephritis the urine was diminished in quantity, of high specific gravity, and contained a large amount of albumen, because these organs became choked with excrementitious matter, and could no longer be washed out by the water derived from the Malpighian tufts.

Dr. Isaac E. Taylor, having referred to the fact that in the cases studied by Dr. Grauer death had occurred in from four to eight weeks, said he would like to inquire what the condition of the kidneys was in those cases which terminated fatally within thirty-six hours from the onset of the attack of scarlatina? He related in this connection several cases which had occurred in his own experience.

Dr. Daniel Brown thought that the virus of scarlatina found a soil peculiarly fitted to it in the skin, the intestines and the lining membrane of the glands, and that by its effect upon these structures an irritation of the nervous system was set up that was sufficient to account for the class of cases referred to by Dr. Taylor. It was very much, he said, as though the child died from shock. Scarlet fever had the effect of arresting almost all the secretions of the body, and in his treatment, therefore, he was in the habit of employing such remedies as tend to stimulate the secretions. By pursuing this course he had found that the temperature was kept down, and that the danger of unpleasant sequelæ was greatly diminished.

Dr. Gouley said that a number of years ago, during several epidemics of scarlatina at the Nursery and Child's Hospital, it had been somewhat surprising to him, as well as to the late Dr. George T. Elliott, who was one of the attending physicians, that so many of the children were affected with nephritis; and the point that interested him most was, that of the many who recovered, the larger number recovered promptly and completely. He should like to inquire, therefore, whether it was not rare for chronic nephritis to result?

The President, Dr. Leale, said that some fifteen years ago, when he was attending physician for diseases of children at one of the largest dispensaries in the city, he was struck with the large number of cases of dropsy that presented themselves; and he found that the great majority of them were in chil-

dren who had passed through an attack of scarlet fever without any medical attendance. An interesting point which he had noticed in examining the urine from day to day in cases of scarlatina was, that although for a time there might be no sign of kidney trouble, it was a fact that almost invariably albumen appeared in it on the twenty-first day; thus following upon the desquamation of the skin. When scarlatinal dropsy was moderate in amount, there was, he thought, usually very little difficulty in promptly relieving the patient. Some of the microscopical points treated of in the paper also were discussed by Dr. L. J. MacNamara.

In some concluding remarks, Dr. Grauer said that in the cases referred to by Dr. Taylor, in which death occurred within twenty-four or forty-eight hours, there was complete suppression of urine, and that the condition found after death was acute glomerulo-nephritis. In reply to Dr. Gouley's question he stated that while, in the majority of cases, the children undoubtedly recovered promptly, in a certain proportion of cases the kidney trouble became chronic. He had at present under observation a child 8 years old who had an attack of scarlet fever two years ago, and who was now, as a result of it, suffering from chronic interstitial nephritis, with bloody urine.

Professor Joseph D. Bryant presented a vermiform appendix which he said he had removed from a patient last summer. The case occurred in a neighboring town, and was seen in consultation with Drs. Janeway and W. T. Bull. The cause of the illness, which occurred in a gentleman 45 years of age, previously in good health, was entirely unknown.

About fifty hours before Dr. Bryant saw him he was suddenly attacked, without appreciable cause, with a moderately severe pain in the epigastric region. He attached but little importance to it, and, attributing it to a slight diarrhœa which he had had for some ten or twelve hours previously, took a mild cathartic, which afforded him marked relief. He noticed no pain or tenderness in the right iliac region.

About fifteen hours afterward the pain became more severe than at the outset; but was still located in the epigastrium. The family physician was called, and he prescribed another cathartic, followed by an anodyne. The medicine did not move the bowels, and the pain increased; while the abdomen now became tympanitic, and nausea, with occasional vomiting, set in. The vomiting, however, was not characteristic of any special morbid process. Enemata were administered, but seemed to dislodge only a few small scybalous masses. The condition of the patient became gradually worse, and Professor Janeway was called in consultation; arriving about forty-five hours from the first attack of pain. Five hours later he was seen by Drs. Bryant and Bull, and the following facts were noted: The patient's perceptions were intact, although somewhat blunted by the previous use of opium. Persistent, though not severe, nausea existed, with occasional vomiting. The matter vomited had no distinctive characteristics. The abdominal walls were extremely distended, with tympanitic resonance well marked in all situations. Hepatic dulness normal. Tenderness on pressure very general, but best marked at the lower portions of the abdomen. No isolated point of special tenderness was discovered, and all pain was still referred to the epigastric region. The abdominal walls were too tense to render deep palpation of any service as a diagnostic measure, and digital rectal examination disclosed nothing abnormal. Temperature 102; pulse 108. Respiration increased in frequency, but painless. Bowels obstinately constipated, with an absence of all intestinal sounds and of appreciable vermicular movements. The thighs were flexed. Urine drawn off with a catheter.

As the result of this examination the consultants believed, 1, that a more or less general peritonitis existed; 2, that it was secondary to either obstruction of the intestinal tract or perforation of it; 3, that immediate measures of relief must be taken to insure a chance for recovery; 4, that medicinal measures afforded no such chance; 5, that an exploratory incision of the abdomen was warranted.

The patient willingly gave his consent, and the operation was performed in as thoroughly antiseptic manner as the contingencies of the case would admit. As soon as the peritoneum was incised a very small amount of thin, non-offensive, reddish colored fluid escaped. The small intestines were extremely distended, and their serous surfaces were deeply congested. The sigmoid flexure (which extended across to the right iliac process) presented similar appearances. In some situations evidences of recent lymph were seen. No characteristic local indications of an obstruction could be found anywhere. The intestines at and about the right iliac fossa presented the evidences of a more profoundly inflamed condition, and for this reason the caput coli was closely examined. It, too, presented appearances similar to the contiguous intestines.

The vermiform appendix was then sought for and found, but with considerable difficulty. It arose from the inner and peritoneal surface of the cœcum, was about 2½ inches in length, and covered entirely by peritoneum, and was unattached, except at its origin from the cœcum. It was standing nearly erect between the intestinal folds, and was swollen and darkly congested; presenting somewhat the outline of a distended leech. At its base three perforations were found, two of which were each about the size of a small pea, while the other was of somewhat smaller size. In one of the openings was a small mass of fæcal matter. At and around the base of the appendix a considerable amount of the reddish, non-offensive fluid mentioned was found, and it was mixed with flakes of recent lymph.

The appendix was tied at its base, below the point of perforation, with a strong silk ligature, and removed with scissors. The abdominal toilet was performed with antiseptic sponges and a warm solution of bichloride of mercury (1–10,000). A drainage-tube was introduced, and the abdominal wound closed and dressed antiseptically. The patient rallied from the immediate effects of the operation, but died twelve hours afterwards from exhaustion.

In concluding his narrative Dr. Bryant called attention to the following special points of interest in connection with the case: 1, the preceding diarrhœa;

2, the absence of distinctive pain at the seat of the lesion; 3, the location of this pain in the epigastric region; 4, the comparative quiet following the first attack; 5, the existence of normal hepatic dulness; 6, the extension of the sigmoid flexure to the right iliac fossa; 7, the unusual arrangement of the vermiform appendix; 8, the absence of the evidence of any restricting inflammatory process; 9, the uncertainty attending the diagnosis of the exciting cause of the patient's condition; 10, the unusual means adopted for the relief of the patient. P. B. P.

PAROTIDITIS AND PREGNANCY.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—The following case is to me one of interest and rarity: Mrs. S., aged 29, three months pregnant, was taken with parotiditis. On the third day the swelling abandoned the parotid glands, and miscarriage followed. She has had four previous pregnancies, of which the first, third and fourth were normal. The second pregnancy miscarried, which was attributed to fright. Are there any instances in which metastasis from the parotid glands to the uterus has occurred with results like the above?—Very truly yours, J. FRANK PAGE, M.D.

MISCELLANEOUS.

OHIO STATE SANITARY ASSOCIATION.—The fourth annual meeting of the Ohio State Sanitary Association will be held in the Board of Trade Room, City Hall, Columbus, Ohio, on Thursday and Friday, Feb. 10 and 11, 1887. Among others the following papers will be read:

"The cause of deafness and blindness with special reference to the eruptive fevers." S. L. McCurdy, M.D., Surgeon for the Penna Co., Dennison, Ohio.

"Cremation of the lower animals." E. S. Rickets, M.D., Portsmouth, O.

"Water Closets and Privy Vaults." John McCurdy, M.D., Youngstown, Ohio.

"Injurious Gases." David O'Brine, M.E., M.Sc., M.D., Assistant Professor of Chemistry, Ohio State University, Columbus, O.

"Our Fever Epidemic from Drinking Sewerage." C. E. Kurz, M.D., Bellaire, O.

"The Sanitary Condition of Sandusky before and after the Completion of Water Works and a Sewerage System." Elwood Stanley M.D., U. S. Marine Hospital Service, Ohio.

"Syphilis from a Sanitary Standpoint." C. E. Beardsley, M.D., Ottawa, O.

"School Sanitation." Hon. LeRoy D. Brown, Ph.D., Ex State School Commissioner, Hamilton, O.

"Some of the Practical Results of our Criminal Laws from a Sanitary Standpoint." R. Harvey Reed, M.D., Mansfield, O.

"Diagnostic Responsibility." H. M. Lash, M.D., Athens, O.

"Examination of Air of Apartments." Curtis C. Howard, M.C., Professor of Chemistry, Starling Medical College, Columbus, O.

"Hygiene of the Sick-Room." F. C. Larimore, M.D., Mt. Vernon, O.

"The Sanitary Condition of the City of Mexico, from Personal Investigation." E. D. Shreve, C.E., Bucyrus, O.

"Ptomaines and Poisoning by Tainted Foods." J. U. Barnhill, B.S., M.D., Lecturer on Toxicology, Columbus Medical College, Columbus, O.

"The Relation of Climatic Changes to Certain Diseases, with chart illustrations." E. M. Mark, Esq., Sec'y Ohio Meteorological Bureau, Columbus, Ohio.

"The Chronic Insane under County Care and in the Care of Families." F. H. Darby, M.D., Chairman of Sanitary Committee, Morrow, O.

Reduced rates have been secured on all lines centreing in Columbus, and will be granted to all persons desiring to attend the meeting, who, on application to the Secretary, at least one week prior to the time of the meeting, will be furnished with the proper certificates, which *must* be secured before leaving home.

REGISTRATION OF BIRTHS AND DEATHS IN ILLINOIS.—In the city of Chicago the death reports are as complete as they can be made, owing to the burial permit system, but there are about one-fourth of the returns of births lacking. This is mainly owing to neglect upon the part of the profession, as the midwives as a rule make these returns promptly. An effort will again be made at the coming session of the General Assembly to so amend the law as to relieve the certifying physician of unnecessary labor in connection with these returns, and the Illinois State Board of Health cordially invites the exercise of influence to this end. The returns last year indicate an increase of 25 per cent. over the previous year, in consequence of a circular letter sent to the delinquents in February and March. It is to be hoped that all returns will be made promptly.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 25, 1886, TO DECEMBER 31, 1886.

Major Egon A. Koerper, Surgeon, U. S. Army, granted leave of absence for two months, to take effect about January 1, 1887. S. O. 297, A. G. O., Dec. 27, 1886.

First Lieut. Jno. L. Phillips, Asst. Surgeon, granted one month's extension of his leave of absence. S. O. 297, A. G. O., Dec. 27, 1886.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING JANUARY 1, 1887.

Anderson, F., P. A. Surgeon, to U. S. S. "Thetis."

Auzal, E. W., Asst. Surgeon, detached from R. S. "Independence" and ordered to Coast Survey Str. "McArthur."

Green, E. H., P. A. Surgeon, detached from Naval Laboratory for temporary duty on R. S. "Independence."

Gatewood, J. D., P. A. Surgeon, to Naval Academy, Jan. 5, 1887.